THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—39TH YEAR. SYDNEY, SATURDAY, FEBRUARY 2, 1952. No. 5.

Table of Contents.

[The Whole of the Literary Matter in THE MEDICAL JOURNAL OF AUSTRALIA is Copyright.]

ORIGINAL ARTICLES— Page.
An Address, by Roy F. Watson 133
The Physicist's Contribution to Cancer Treatment and Research, by J. H. Martin, B.Sc., Ph.D., A.Inst.P. 134
A Clinic for Deaf Children: Analysis of Cases, by Patricia R. Davey, F.R.C.S. 137
Melanoblastoma, by Vincent J. McGovern 139
A Preliminary Report on the Use of Prefabricated Nylon Weave in the Repair of Ventral Hernia, by V. H. Cumberland, M.S., F.R.A.C.S., F.R.C.S. 143

REPORTS OF CASES—
Bilateral Phæochromocytomata, by E. H. Stokes .. 144

BOOKS RECEIVED 146

LEADING ARTICLES—
A Study of Physical Disablement 147

CURRENT COMMENT—
Quinine and its Development 149
Gastric Diverticula 149

ABSTRACTS FROM MEDICAL LITERATURE—
Radiology 150
Physical Therapy 150
Medicine 151

SPECIAL ARTICES FOR THE CLINICIAN—
V. Nutrition in Disease 152

CONGRESS NOTES—
Australasian Medical Congress (British Medical Association) 154

BRITISH MEDICAL ASSOCIATION NEWS—
Annual Meeting 155

OUT OF THE PAST 162

CORRESPONDENCE— Page.
The Therapeutic Uses of Cortisone and ACTH .. 162
The Importance of the Relativity of Blood Pressure and other Signs in the Prevention of Eclampsia 163
Australia's Role in the Contemporary Commonwealth 163
A Criticism 163
"Colles Fracture" 164
The Notification of Tuberculosis in New South Wales 164
Curare and Electro-Convulsive Therapy: A Simplified Technique 165

OBITUARY—
Bertram Milne Sutherland 165

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA 167

THE ROYAL AUSTRALASIAN COLLEGE OF PHYSICIANS—
Allocation of Cortisone 167
Examination for Membership 168

CONGRESSES—
First International Congress on Medical Librarianship 168

AUSTRALIAN MEDICAL BOARD PROCEEDINGS—
Tasmania 168

NOTICE—
Australian Scientific Societies and Professional Associations 168

NOMINATIONS AND ELECTIONS 168

DIARY FOR THE MONTH 168

MEDICAL APPOINTMENTS: IMPORTANT NOTICE .. 168

EDITORIAL NOTICES 168

An Address.[1]

By ROY F. WATSON,

Retiring President of the Victorian Branch of the British Medical Association.

IN this year of grace we come to the end of 100 years of the Medical Society of Victoria and I come to the end of 39 years of medical life. It is also the end for me of active medical practice. It is presumed that speakers next year, when the Medical Society of Victoria is celebrating its centenary, will do justice to the history and merits of the Society.

It seems obvious that, as I must give an address on the occasion of relinquishing the presidency and handing it over to a more active holder, I should review the medical events of the last forty years. To begin with I should remind you of what has happened in that time. It has been a most remarkable time in the history of medicine and of science. At the time of our graduation Sir Harry Allen was emphasizing the importance of tertiary syphilis in producing serious lesions of the body. It happened that Dr. Konrad Hiller had just returned from studying under Wassermann. He introduced the complement-fixation test for syphilis to Melbourne, working with Dr. R. Bull at the university bacteriological laboratory. Consequently we saw tertiary syphilis everywhere. I believe that partly represented the truth at that time. For various reasons it is not true now that these lesions are so important. But they must not be forgotten or we may get into serious error. As an instance: A patient presented herself with weakness, and difficulty in breathing and swallowing. She had lived in China for many years and had married a Chinese—so my mind was trying to recall all the diseases I had heard of that were peculiar to the Orient. Examination showed a number of puckered scars on the skin of her body and face. The palate and fauces were grossly scarred and the soft palate was adherent to the posterior pharyngeal wall. There were signs of collapse in the upper lobe of her left lung. As we were just rediscovering bronchial carcinoma, I referred her to a chest surgeon for further investigation. Radiography and bronchoscopy showed an extreme stenosis of the bronchus to the left upper lobe. And the Wassermann test of her blood gave a "++++" reaction! I, who had been brought up in the era referred to, had not sent that blood for examination! The symptoms responded to "Novarsenobillon" and iodide of potash. Her lung reexpanded, and now, ten years later, she is to be seen wheeling her granddaughter about the streets.

The moral of that, if there is one, is, firstly, that we should not forget the old knowledge, and secondly, that we now have accurate means of diagnosing many diseases, and it is on that note that I wish to make this short paper, namely, the development of clinical pathology.

As an introduction, I draw your attention to some of the famous men whose work was just beginning to have an effect on medical practice.

Leeuwenhoek lived in the seventeenth century and developed the microscope for observing minute plant life. Pasteur was born in 1822 and died in 1895—five years after my birth. Lister, founder of antiseptic surgery, was born in 1827 and died as recently as 1912. Röntgen, father of X rays, born in 1845, died more recently still—in 1922. Banting was born in 1892 and was killed in an aeroplane crash during the recent war. Insulin was not in use until after I was qualified. Minot, in 1926, applied work done previously on liver to its use in pernicious anæmia.

To illustrate the newness of the ideas to which they gave birth, let me cite the case of an honorary physician

[1] Read at the annual meeting of the Victorian Branch of the British Medical Association on December 5, 1951.

at the Old Melbourne Hospital. One Dr. John Nihill, a dour physician, about whose merits opinions differed, adopted about 1910 the practice of ordering an X-ray examination of the chest and a search of the sputum for tubercle bacilli of any patient who had a history of persistent cough and sputum. This practice was greeted with hilarity and ribald remarks by the resident medical officers and senior students.

But when it began to show results our attitudes changed. And who now regards such methods as anything but routine?

Of these famous names, the most important from my point of view are Leeuwenhoek and Pasteur—the former the inventor of the modern microscope and the latter the discoverer of microbiology and the founder of bacteriology.

There have been many attempts to define clinical pathology, and I submit another—"the cult of the microscope". Without that instrument, bacteriology, hæmatology and pathological histology could not have developed to their present state, and could not be carried on.

Without Pasteur's concept of microorganisms as the cause of fermentation and putrefaction, and finally, as the main factor in disease of the human body, bacteriology and, in fact, modern medicine and surgery could not have developed.

Therefore without the use of the microscope and its ancillaries in the detection of disease processes in the human body, clinical pathology would not exist. And it has not existed as an entity for very long. Physicians used the processes a little in their diagnoses, but it was not until 1923 that the first Society of Clinical Pathology appeared in the United States of America. Apparently it was in that country, some time before this, that the term "Clinical Pathology" was coined. In 1926 the British Association of Clinical Pathologists was brought into being. It is only in the last few years that a Section of Clinical Pathology was formed within the British Medical Association in Victoria. To anyone interested I commend the leading article in the *British Medical Journal* of July 14, 1951, as instructive in the history of clinical pathology.

In Victoria the development of clinical pathology is associated, of course, with the name of Crawford Henry Mollison. That great man, for many years, carried on alone the clinical pathology of the old Melbourne Hospital. With a microscope which we would despise now, and a modified carpenter's plane for cutting his frozen microscopic sections, in a little dark room in the mortuary at the far end of the hospital yard, he produced most excellent pathological histology specimens. And his opinion on them was unsurpassed up to the time of his last illness. For more than fifty years he carried on this work; at first, as I said, he was unaided except for an untrained technician. In 1912 Isaac Jones was appointed as resident clinical pathologist to help him with the routine work of an expanding hospital. Jones was followed in 1913 by Reginald Webster, who was in turn succeeded by me (1914) and Ivan Connor (1914 and 1915). Webster left to found the Children's Hospital Laboratory, and about that time Andrew Brenan was appointed to Saint Vincent's Hospital.

From these beginnings there developed the pathological laboratories and research units of the teaching hospitals. From these foundations come out men and women to practise privately this specialty, as it has now become. While I was resident, G. C. McK. Mathieson was appointed to be first director of the Walter and Eliza Hall Institute. When he came back from collecting new ideas and equipment in England, he was a familiar sight round the hospital. He developed a passion for venipuncture and was to be seen with a wide grin on his face and a ten cubic centimetre syringe and needle in one hand, and a small oistone in the other. He also was a great and lovable man. He insisted on going away with a Field Ambulance in 1914 and on Gallipoli a sniper's bullet put that great brain out of action. He was followed in due course by worthy successors—Patterson, Kellaway, Burnet.

One has only to take a tour of the principal hospitals and research units in Victoria to realize the development in equipment and manpower and the scope of the work since those early days and during the term of about forty years.

But now, as then, it is the man behind the machine that counts. It is for that man, the clinical pathologist, and his training that, in conclusion, I wish to make a plea. It has been the fashion of late years, in orations and exhortations, to decry clinical pathology. But we must use it, and we must not abuse it. We have been told that we should use our natural senses, our powers of observation, our clinical sense. I admit that all that is true. But we have at our disposal a wonderful series of aids to diagnosis, or rather for confirmation or refutation of diagnosis. These aids are abused when a medical man's first act, after taking a somewhat perfunctory history, is to make a list of laboratory examinations that might help in making a diagnosis. He should make a tentative diagnosis from a careful history and physical examination, as the wise men tell us. Then he should select the tests that will clinch the diagnosis or alter it. And he should consult the clinical pathologist when making his selection. In a word, the latter should be of consultant status. That is using the wonderful helps of the modern diagnostic laboratory in an intelligent way.

How are we to know who is a competent clinical pathologist? How is he to be trained?

In Victoria, as I have indicated, he just happens. In another State there is a diploma; but its main result, so I have been told, is to produce an expert biochemist, and the examination scares candidates off because it is so difficult.

In this State we need some sort of a hall-mark that will enable us to say of a man possessing this qualification, that he has served so man years in pathological laboratories, that he has good academic qualifications. In my opinion there should be two levels. One should be of the nature of a diploma, the other a higher degree. If one should have the temerity to prophesy—and admittedly it is a dangerous pastime—one would say that a number of medical graduates would be required to direct the laboratories of those hospitals planned, or actually under construction, by the Hospitals and Charities Commission. Not all of these will be attached to one hospital. They may be asked to supervise groups of outer suburban hospitals or several country base hospital areas. For the teaching hospitals and larger base hospitals a man with a higher degree would be required. For other hospitals some certificate of experience and fitness would suffice.

I do not know how this is to be implemented. But I suggest with all respect, but with firm conviction, that it is up to the university and The Royal Australasian College of Physicians and the Royal Australasian College of Surgeons to devise a course, or courses, of study and examinations to fit medical graduates to be directors of clinical pathological laboratories. Within the last few years a course has been set up for technicians in those laboratories. It is surely not too much to ask that clinical pathologists should be educated and attested.

THE PHYSICIST'S CONTRIBUTION TO CANCER TREATMENT AND RESEARCH.

By J. H. MARTIN, B.Sc., Ph.D., A.Inst.P.,
Physics Department, Cancer Institute Board, Peter MacCallum Clinic, Melbourne.

IN medical science and perhaps especially in cancer treatment and research, physics plays an ever-increasing part. The diagnostic and, later, the therapeutic possibilities of X rays in such treatment and research became apparent shortly after the discovery of X rays by Professor W. K. Röntgen in 1895. As soon as X rays were used therapeutically it was clear that little progress could be made without a unit which would be a measure of the amount of

X radiation delivered, and at the first International Congress of Radiology in 1928 a unit of X-ray dose, the Röntgen, was defined. Physicists played a major part in formulating the definition of the unit and its modification ten years later to make possible the measurement, in Röntgens, of the γ rays from radium, as well as in developing instruments suitable for the ionization measurements in terms of which the unit was defined. Compared with previous methods of assessing the X-ray dose, such as the pastille and the erythema dose, the use of this unit represented a tremendous advance in accuracy and as a basis for comparison of clinical results.

The next logical step was to devise a means of assessing the dose received at a depth in the body. This was achieved by measuring the distribution of the X rays in "tissue-like" materials, so-called "phantoms" being used. In these volumes of pressboard, wax and water, the physicist explored the distribution of the radiation for a variety of conditions of kilovoltage, filtration, field size and target-surface distance, and produced charts, called isodose curves, on which points receiving the same dose were joined in continuous curves. These curves showed the distribution in planes containing the centre axis of the beam, and were usually plotted to show the radiation distribution as a percentage, the surface dose being 100%. Now when an X-ray field is placed on a patient's skin it is possible to determine with reasonable accuracy the dose which will be received at any point inside the body and, usually of most interest, at or near the tumour. This step produced the excellent development that attention was transferred from skin to tumour dose.

These isodose curves are one of the most important tools in that part of the treatment procedure known as "clinical planning". In a large radiotherapy centre a patient, after attending the normal medical clinics (at which it is very valuable for a physicist to be present to see the real problem, not as a neat diagram on paper, but in all the complexity of reality), should then attend a special "measurement clinic". Here the rough recommendations of the radiotherapist as to treatment technique, field sizes and positions, kilovoltage *et cetera*, are discussed and made more precise. The physicist's ingenuity can make, and has made, valuable contributions to the improvement of this stage in the planning of X-ray treatment. With the aid of the isodose curves, which give the radiation distribution only in a plane containing the centre axis, it is possible to estimate the dose at a tumour inside the body either from one field alone or from a combination of fields which are all in one plane. Frequently, however, in multifield techniques, this is not so, and instruments have been devised to enable the distribution of radiation in planes not containing the centre axis of the beam to be obtained, and also to obtain volume distributions for a number of fields in different planes.

With the aid of these and other instruments to obtain the patient's cross-section and other dimensions of interest, kept in the measurement clinic, a well-trained X-ray technician, working under a physicist and in collaboration with the radiotherapist, can render valuable service in working out the radiation distributions.

For many sites a fairly standard technique will often be evolved, designed to give an adequate dose to the tumour and perhaps also to affected glands, while as far as possible any structures particularly susceptible to radiation damage are avoided and the surface dose is kept at a minimum. However, patients are not cast in standard moulds, nor will the location and extent of the affected tissue be the same in different cases, and the skill and experience of the physicist or technician will be seen in the ease with which alterations will be made to meet the special circumstances.

In considering new field arrangements it is only too easy to forget the complexities of the geometry of the patient, and by transferring the simple geometry on sheets of paper to the patient, to impose a rigidity of technique. But the comparative simplicity and accuracy of the physical methods should, on the contrary, give greater flexibility, and part of the technician's time should be spent in exploring new field arrangements in an endeavour to achieve more nearly what the radiologist considers desirable.

Once a suitable distribution for the case concerned has been planned, the next stage is to ensure its reproduction within the patient. The problem is mainly one of beam direction, the importance of which should be emphasized, for it is no mean achievement to place into position accurately as to location and direction the applicator of an X-ray plant, daily, over a period of weeks. A variety of methods, none as yet either universal or perfect, has been developed; the exit pointer, the Manchester protractor and the use of casts with fields carefully located on them are some examples of the methods available, and by the intelligent use of these or other methods, reproducible conditions can be assured.

It would be wrong to give the impression that the foregoing represents a simple, accurate and "cut-and-dried" technique. For example, the measurements which produced the isodose curves were made in "tissue-like" materials, but no allowance was made for the presence of bones and air spaces which will alter the dose distributions to an extent varying with the quality of the primary radiation. When possible, therefore, checks should be made during treatment of the patient. Condenser ionization chambers and dosage rate meters have been developed whose dimensions are such that they may be inserted in body cavities, so that in many cases dose distribution calculations can be verified, while beam direction, especially in multifield techniques, may often be checked by means of photographic film.

Such is an outline of some of the almost routine physical services which are required by the X-ray section of a good radiotherapy department.

The use of radium and other radioactive substances, of which, as a result of present advances in nuclear physics, there is now a greater variety, poses many problems.

Not many years ago, in order to correlate radium and X-ray dosage, a great deal of time and energy was spent in determining the dosage rate at one centimetre from a point source of one milligramme of radium in a 0·5 millimetre platinum case, and from this work the value of the dosage rate was found to be 8·3r per hour. Similar numbers had to be determined for all the radioactive elements which are now available. A theoretical approach, which coincided very well with the experimentally determined figure for radium, was possible here, and from a knowledge of the energy of the radiations in the "decay scheme" of the element concerned, it is now a simple matter to state the dosage rate in r per unit of time for a given source.

Next, with the aid of a little mathematics, the physicist was able to calculate the dosage distributions around radioactive sources of simple shapes, such as rings, cylinders, disks *et cetera*. A criticism may be made that cancer is not a disease of spherical masses and point sources, cylinders and rings, and therefore that these mathematical and physical solutions to the problem are completely inadequate. Experience often shows the inadequacy of these solutions, but the treatment of these simple cases leads to good approximations in the complex ones—the Paterson-Parker rules can be so considered—which arise in almost every practical case. Often, too, the nicely planned geometrical arrangement of sources cannot be obtained in practice, owing to deformation of body structures, difficulties in insertion and so on. The treatment by radium of cancer of the *cervix uteri* is a good example of this difficulty. Here, for example, by the use of radiographs of the sources in position, the physicist can reconstruct the geometrical arrangement of the sources and obtain a more accurate assessment of the dose distribution. Studies of such volume distributions in theory and as found in practice enable adjustments to be made for size, shape and deformity of the pelvic structure, and assist in quantitative combination with X-ray fields.

The use of radium and radon ensures sources of certain definite sizes, shapes and strengths, an advantage from the point of view of dose calculation, which disappears in many cases in which the new radioactive isotopes are used. Here we have a variety of sources of radiation which can be administered to the patient in solution and which will

be found afterwards in many parts of the body. In his endeavour to give the therapist dose values, the problems which face the physicist here are considerable. The amount of radioactive material in any site will vary more or less rapidly with time; the material may or may not be uniformly distributed in the organ concerned; the size of the organ may not be known, nor may its depth below the surface. All these and other factors may affect the readings which his instruments, in most cases located outside the body, will give and which he must interpret to assist the therapist. To this end he may avail himself of such aids as Geiger counters of various types, small ionization chambers, scintillation counters and autoradiographs, and from a variety of measurements on the patient and excreta he will obtain at least an approximate answer.

In this field new techniques of treatment are possible. What are the potentialities of radioactive colloids, tantalum wire gauze, hollow nylon thread containing radioactive Co-60 wire, and plastics impregnated with radioactive materials, to mention a few developments of the moment, all of which require physical measurements and services for their development and clinical use?

Alongside these developments it is clear that the physicist will spend a part of his time devising new instruments and methods of measurement. For example, he will require a range of condenser ionization chambers, one end of which range will enable him to detect 0·001*r*, while the other will measure, say, 200*r*, often with severe limitations imposed on their geometry if they are to be used for intracavitary measurements or dose determinations in which rapid dose variations with distance are expected. He will require dosage rate systems which will measure about 0·01*r* per day and others which will measure 100*r* per minute. He will require instruments to detect β rays, X rays of various qualities and perhaps neutrons and α rays, and he will be interested in new methods of measurement, such as solid and liquid scintillation counting.

Over and above these more direct services to radiation therapy the physicist should be responsible for the safety of staff handling sources of radiation. His will be the responsibility for checking the protection of X-ray plants, both for personnel outside the treatment room and for the patient undergoing treatment on the plant. He will be involved in the care and custody of radium, and in the handling and checking of old stock, of new sources and of damaged and leaking sources. He must supervise the health monitoring systems and check the film badges or ionization chambers carried by personnel concerned with radioactive work, see to the disposal of radioactive waste and make any necessary measurements on staff carrying out special operations in which there are extra radiation hazards, such as treatment involving the use of large amounts of radioactive materials. In a centre employing a large number of radiation sources and handling large amounts of radioactive material, the importance of this function for the welfare of all concerned cannot be overemphasized.

In addition to these duties there are a number of more routine items to which the physicist will have to give attention, such as the maintenance of standards of dose and instruments for such standard measurements, the calibration of X-ray plants, the checking of beam and applicator alignment and the adjustment of the radiation to the quality desired by the therapist *et cetera*.

In his range of activities the physicist should not neglect the diagnostic X-ray department. Here, after all, is a very important preliminary stage in the treatment of a tumour, the endeavour to estimate its position and extent. The physicist will play his part in devising markers and jigs which, appearing on the radiographs, can be used as reference in locating the lesion and subsequently improving the beam direction on the treatment plant. He should also be mindful that too much screening or too many radiographs are not involved in these processes, which might result in large doses to the patient's skin, especially if, later, treatment fields are to pass through that area, as this may prejudice the chances of successful treatment; further, as always, he must ensure that over-exposure of the staff (a too-frequent occurrence in diagnostic departments) does not take place. He should also explore the improvement of techniques, for example, by the use of harder radiation, and the potentialities of new aids, such as photo-timing and image intensification.

It is now generally conceded that some special instruction in physics is necessary if the radiotherapist is to understand fully the various techniques he will be called upon to use, and the physicist would be doing less than his duty if he did not play some part in the instruction of radiotherapists in training. The instruction must be sufficiently flexible to meet the needs of men whose interest and aptitude are in being good radiotherapists, as well as for those whose strong desire it is to play a part in future developments. Thus the course should present a picture of the nature of the radiations, of how they are produced, measured and used, and of the physical basis of radiotherapeutic technique, and it must deal adequately with the physics underlying the chain of events preceding biochemical and biological effects of radiation in living tissue.

It would now be fair to ask what we expect to attain by this insistence on physical control and precision, and if the considerable outlay in men and material is justified. For example, it has been demonstrated that in certain cases the most careful study and control of the physical conditions of treatment have not materially improved the percentage of cures. This in itself represents an advance. It is now certain that the failure is not due to careless or inadequate dose, and that we must look elsewhere for the cause of failure. Again, a school of thought existed which believed that a cure was only a matter of obtaining a sufficiently large dose to the tumour. Physical aids have given us the ability to give these large doses safely, and it has been shown conclusively that this is not so, that other factors are involved. Further, there is no doubt that the immediate and palliative results have been greatly improved by the application of the new physical techniques. Again, more rigid physical control has decreased the number of major catastrophes prevalent with techniques less rigorously controlled, has enabled the radiologist to approach the "dosage precipice" with much greater safety, has placed the comparison of results on a much sounder basis, and, very important, by eliminating "hotspots" and affording some control on reactions, has made the lot of the patient, on the whole, easier. It may be stated that physical control has put sights on a weapon previously fired rather blindly.

In the achievement of satisfactory results the most important factor is cooperation. Whatever his academic attainment, the physicist must realize that his function is to be useful, while the therapist should realize the importance of regular acquaintance with the research laboratory and should become aware of, and make his contribution to, the considerable amount of thought and work which goes into even small developments. Such regular contact inspires a sense of unity of purpose in the departments, even though separately administered, which is the key to the situation.

Without neglect of valuable services such as are outlined above, it is in providing a sounder and more secure basis for future developments that physics must now play its part; the phase in which physics explained the observations and experience of clinicians is passing, and physics can now predict. For example, physical experiments with some of the new weapons, such as high-energy X rays, high-energy electrons, neutrons and protons, have shown differences in behaviour; in the case of high-energy X rays a peak in dose is reached some distance below the surface, and we can guess, at least, from purely physical explanations, what differences are to be expected, can state tentatively what we may allow, what total energy absorption the body will tolerate, and generally tackle the new problems more confidently. One very important step in the process was made at the Sixth International Congress of Radiology in London last year, when it was decided that the use of the Röntgen unit of measurement be restricted to X rays below three megavolts, all other measurements to be made in the absolute unit ergs per gramme. The

use of this system makes direct comparisons of biological effects of X rays and neutrons, for example, more feasible.

In conclusion, it may perhaps be stated that pure physics has, for the present, outrun clinical practice and biophysics, and that the next big advance in the treatment of cancer will be made by applying the resources of physical methods to the study of the more biological aspects of the problem. Much remains to be done, and to attract the best type of physicist to the field it is desirable that the department of medical physics be separate from, though closely allied to, the medical departments and be under the control of a medical physicist, preferably with university status. In such circumstances, a little removed from the severe pressure of the daily clinical round, a wider range of fundamental research and technical advance can be pursued.

A CLINIC FOR DEAF CHILDREN: ANALYSIS OF CASES.

By PATRICIA R. DAVEY, F.R.C.S. (Edinburgh),
Honorary Assistant Ear, Nose and Throat Surgeon, Royal Alexandra Hospital for Children, Sydney.

DURING a review of the patients who had presented themselves during the first twelve months of the work of the Deafness Clinic at the Royal Alexandra Hospital for Children, it became obvious that the patients naturally divided themselves into the following two groups: group A, which consisted of children of pre-school age whose hearing loss was so severe as to prevent or retard the acquisition of speech; their ages ranged from eighteen months to four years; group B, which included children of all ages suffering from a variety of lesions and degrees of deafness; some were amenable to surgical treatment, some had irreversible pathological lesions. For the latter group treatment was directed towards making the fullest use of the children's residual hearing, with the assistance of hearing aid, lip reading or both, as indicated for the individual patient.

The distribution of the children into the two groups is seen in Table I.

The pre-school group presented the greatest challenge. Experience has revealed that the last thing of which a mother thinks when her child is backward in passing his normal milestones is his possible lack of hearing. Yet many mothers of severely deafened babies remember that they noted even in the early weeks of the child's life his lack of intrest in, or response to, sound. They naturally turn first to the family physician. The complaints include unmanageability and lack of expected speech development, and failure to turn the head to sound is noted by the observant parent.

One finds that, according to his beliefs, the man upon whom the responsibility is first thrust may tell the mother that the child will grow out of his trouble or that he is mentally deficient; or he may pass the child on to the otologist. By misguided advice and by mistaken diagnosis, at this stage, a child's life may be ruined, or he may be set on the road to becoming a social, useful, speaking person. Three factors are of importance. The first is a correct and early diagnosis. In the influx of the rubella group very many children were denied timely diagnosis by lack of realization of the existence and acuity of their residual hearing—very few of those born deaf are "stone deaf". Secondly, the degree of hearing present may be assessed and auditory training instituted immediately. Thirdly, if one is in doubt it should be assumed that the child is deaf until proved otherwise. The mother can be told that the child's hearing ability is in doubt. This can be done in such a way that she now lives in hope and moulds the child's activities, under direction, along lines on which the foundations of the training of a severely deaf child are founded. When critically examined these will be found to

TABLE I.

Deafness Clinic Analysis.	August, 1949, to August, 1950. (149 New Patients.)
Group A.—Children of pre-school age suffering from severe deafness not amenable to surgical treatment..	18
Group B.—131 children of school and pre-school age :	
(i) Proved to have no hearing loss	33
(ii) Deaf—not amenable to or suitable for surgical treatment	33
(iii) Deaf—submitted to surgical treatment ..	65

TABLE II.
Deaf Pre-School Children.

Patient.	Age.	Ante-Natal Factors.	Post-Natal Disease.	Ætiology of Deafness.	Associated Defects.
J.W. ..	Eighteen months.	Nil.	Meningococcal meningitis.	Meningitis.	Meningococcal ophthalmia (unilateral).
D.C. ..	Twenty months.	Nil.	Nil.	Congenital.	(i) Generalized hypotonia, (ii) squint.
A.C. ..	Twenty months.	Nil.	Bilateral *otitis media.*	Possibly otitic, possibly congenital.	Nil.
R.C. ..	——	Possibly familial; cousin may be deaf.	Measles at three months.	Possible nerve deafness due to measles.	Nil.
G.T. ..	Two years.	Maternal hypertension and kidney disease.	Nil.	Possible maternal toxic origin.	Nil.
R.B. ..	Two years.	Maternal illness in last three months, nature unknown.	Measles before twelve twelve months.	Possible nerve deafness due to measles.	Squint.
L.D.	Two years.	Nil.	Bronchitis and pneumonia.	Possibly congenital.	Nil.
D. de T. ..	Three years.	Pneumonia at sixth month.	Nil.	Possibly due to maternal toxæmia.	Nil.
L.R.	Three years.	Nil.	Nil.	Congenital.	Nil.
J.B.	Three years.	Nil.	Meningitis.	Meningitis.	Nil.
J.S.	Three and a half years.	Born in "blitz".	Nil.	Congenital.	Nil.
E.M. ..	Three and a half years.	Rh incompatibility.	*Icterus gravis neonatorum.*	*Icterus gravis.*	Sight hypertonia.
R.B.	Three and a half years.	Maternal hypertension.	Measles.	Possibly maternal disease, possibly measles.	Nil.
R.C. ..	Three years and nine months.	Nil.	Nil.	Congenital.	
P.W. ..	Four years.	Nil.	Convulsions.	Probably neurological.	Intracranial lesion (proved).
R.C. ..	Four years.	Rh incompatibility.	Kernicterus.	*Icterus neonatorum.*	Spastic. Younger brother also deaf and spastic.
D.W... ..	Two and a half years.	Maternal kidney disease.	(i) Measles, (ii) convulsions.	Possibly maternal toxæmia; possibly measles.	Nil.
B.R.	Two years.		*Otitis media.*	Possibly congenital; possibly *otitis media.*	*Talipes equinovarus*; torticollis.

contain a sound basis of discipline, play activities and organized efforts of concentration. Should time show that the suspicions of deafness have been ill-founded, no harm should have accrued to parents or child; rather should their mutual confidence and interest be increased, whether the final diagnosis is of auditory or speech immaturity or mental retardation or a combination of these.

Among 18 children of the pre-school group with severe hearing loss, a history of possible deleterious antenatal influences was diligently sought. In not one case was there a history of maternal rubella. The recurring incidence of toxæmias late in pregnancy in such cases in which no other cause can be elicited is noticeable in this and other groups of children "deaf" from birth.

The importance of deafness associated with Rh incompatibility is self-evident.

Post-natal disease of possible ætiological significance occurring before the age of speech acquisition occurs in a high proportion of cases. The difficulty of positive ascertainment of the ætiological factor must be stressed.

Detailed analysis of 18 cases is given in Table II.

In the second group (B) 25% of the children tested proved to have normal hearing. In all these cases the patients had been referred from, or were subsequently referred to, the Child Guidance Clinic. A detailed analysis is given in Table III.

TABLE III.

Group B(i): Patients Proved to Have No Hearing Loss.	Number of Patients.
No lesion of ear, nose or throat	11
Speech defect unaccompanied by hearing loss	4
Referred from Child Guidance Clinic for diagnosis, or referred back to Child Guidance Clinic for treatment	17
Referred to educational psychologist for treatment of speech defect of cerebral origin	1
Total	33

In the remaining 75% of patients in group B deafness of varying degrees was proved by audiometry and confirmed by failure to appreciate the conversational voice at the standard twenty feet. The age distribution in this group was noteworthy.

Patients of pre-school age practically failed to appear in the "surgical" group (iii). The reasons for this would seem most outstandingly to be, first of all, the average mother's belief that her child will, as a result of some inborn deviltry, choose to ignore the human voice unless it is associated with the imminence of pleasurable experience. Secondly comes the belief, up till recently voiced only too often, that the child, though suffering hearing impairment, will "grow out of it". This attitude happily seems to be lapsing into well-merited discard. Thirdly, the possibility of intermittent deafness is not appreciated by most mothers. But by the time the child is seven or eight years old his teacher begins to complain of his failure of attention and of his backwardness in tasks involving auditory attention and speech, especially arithmetic and dictation. When during these tasks he turns to his next-door neighbour for help, he is liable to be punished for his unruly behaviour.

In 25% of the total group the condition was not suitable for surgical treatment, and recourse was made to the fitting of a hearing aid combined with tuition in lip reading, or the latter alone if the child was suitable. Suitable positional placing of the child in the classroom was requested of the school.

The pathological lesions in these cases may be detailed as in Table IV.

Those diagnosed as suffering from a hearing defect likely to benefit from surgical treatment and possible later irradiation made up the remainder of the school age group distributed as in Table V.

A follow-up of traceable surgically treated patients revealed the results shown in Table VI.

TABLE IV.

Group B(ii): Patients with Proved Deafness Not Suitable for or Benefited by Surgical Treatment (33).	Number of Patients.
Deafness as a result of maternal rubella	10
Unilateral deafness due to mumps	5
Post-meningitic deafness	2
Cerebral type of deafness	1
High-tone deafness of unspecific ætiology mostly relating in onset to measles	15

Conclusions.

With regard to the severely deaf pre-school child, many diverse ætiological factors are at work. Correct diagnosis and treatment are of more importance than ætiology. Diagnosis must be early and training immediate. In the school age group no child should be denied assistance whether surgical or non-surgical therapy is indicated.

TABLE V.

Group B(iii): Proven Deafness, Suitable for Surgical Treatment (65 Patients).	Number of Patients.
Deafness associated with congenital deformities:	
(i) Deformity of the ear	3
(ii) Cleft palate	10
Disease of upper respiratory tract:	
(i) Deafness due to chronic disease of tonsils and adenoids	19
(ii) Disease of post-nasal space and antra	22
(iii) Excessive post-nasal lymphoid tissue	10
(iv) Nasal allergy	1

When surgical treatment fails or is not indicated, the skilled teaching of lip reading and the fitting of a hearing aid and its intelligent use will make a great difference to the child's education and his attitude to life.

TABLE VI.

Method of Treatment and Result.	Number of Patients.
Subjected to tonsillectomy	17
Audiometric result:	
Hearing normal	9
Hearing improved	6
Hearing unchanged (high-tone deafness)	2
Subjected to surgical treatment of antra and post-nasal space	20
Audiometric result:	
Hearing normal	5
Hearing improved	5
Hearing unchanged	7
Patients untraced	3
Subjected to radon application after proof that no further surgical treatment was indicated	14
Audiometric result:	
Hearing normal	7
Hearing improved	2
Hearing unchanged	2
Patients untraced	3

Fallacies.

An obvious criticism to which this analysis is open arises from difficulties in proving any inferences from such a small group, especially when it is necessary to review patients in a constantly moving population. Some cases have had to be excluded from review owing to the

unsatisfactory position regarding tonsillectomy obtaining during the period under review. Cross-references in cases in which multiple treatments were given render it impossible to compare totals, as one child may figure under several headings.

The unreliability of audiometry and the lack of accepted standards of hearing impairment in this country must be noted.

Summary.

A small group of cases is reviewed with detailed analysis of pre-natal and post-natal noxious influences in the pre-school group.

In regard to the children of school age, a classification of findings is essayed and an attempt is made to assess the value of treatment in a group unselected but probably too small to be of statistical value.

MELANOBLASTOMA.

By VINCENT J. MCGOVERN,

Fairfax Institute of Pathology, Royal Prince Alfred Hospital, Sydney.

PIGMENTED MOLES are perhaps the commonest developmental abnormality affecting the white races. A few become malignant and metastasize rapidly. The majority, however, do not become malignant.

It is the purpose of this paper to state the criteria by which benign, potentially malignant and frankly malignant moles (melanoblastoma) may be recognized (uveal tumours are not included), and to analyse the cases encountered at Royal Prince Alfred Hospital.

Incidence of Moles.

Negroes have fewer pigmented nævi than members of the white races, and malignant moles are rare. When they do occur, they affect the less pigmented areas such as the soles of the feet, the palms of the hands, the nail folds, and the squamous mucous membranes such as those in the oral cavity, conjunctiva, genitalia and anal canal. On the other hand, it is uncommon to find an individual of the white races who has not some moles. In some cases they may be present in the hundreds.

Incidence of Malignant Moles.

When one considers the commonness of moles, malignant moles are rare, and amongst malignant growths in general melanoblastomata (malignant moles) of the skin are fewer than 1%. The person predisposed to malignant transformation of a mole is the fair person with pale skin who does not tan well on exposure to light, but who freckles readily.

Sites of Moles and Melanoblastomata.

Benign moles are most common on the face and neck. They are less common elsewhere, and on the hands, feet and genitalia they occur infrequently. In the present series malignant moles were most common on the head and neck in males, the lower extremity being the next most common site and closely followed by the trunk and upper extremity. In females the lower extremity was the commonest site, the head and neck being the next most common, and the upper extremity was more often involved than the trunk.

It would appear from Table I that the exposed areas are more prone to develop melanoblastomata than the covered area, and that moles of the lower limbs are more prone to malignant change than those existing elsewhere.

In most cases it was not possible to determine whether malignant change had supervened in a preexistent mole. In 101 cases the patients were fairly sure of the preceding condition of the site of the lesion. Twenty-nine female patients and 19 males stated that there had always been a pigmented lesion at the site of the malignant tumour. Twenty-five females and 28 males stated either that a pigmented lesion had appeared gradually and later had grown rapidly, or else that the lump had appeared in blemish-free skin.

If one assumes that malignant change does not commence in absolutely normal tissue, then one must postulate a preexistent nævus of microscopic size. On the other hand, if normal cells can undergo malignant neoplasia, then any areas of skin or squamous mucous membrane, by virtue of the melanoblasts situated in the region of the basal cell layer, can give rise to malignant melanoma.

Trauma.

Trauma is undoubtedly a factor to be considered in the production of malignant change. In this series malignant moles of the feet were more common in women than in men. In many instances, the increased activity of what had been a quiescent lesion dated from a traumatic episode. Minor trauma is very likely to cause ulceration to any already malignant tumour, so that the exact role played by trauma is difficult to assess, as in the following case:

A.J.M., a female patient, aged thirty years, had always had a mole on her left calf. This became darkened and enlarged after a scratch by her baby twelve months prior to her admission to hospital. She was found to have inguinal metastases. Biopsy confirmed the diagnosis.

In nine cases moles appeared at the site of trauma where no such blemish had been noticed before. In all cases the skin had been broken and the lesions were malignant both clinically and microscopically.

E.J.R., a male patient, aged forty-five years, in 1935 had had injection of varicose veins. At the site of injection a flat black patch appeared in his leg. It grew very slowly until he received a knock in 1941, after which it enlarged rapidly. When he was admitted to hospital eight months after enlargement had commenced, the appearance was that of a malignant melanoblastoma with inguinal metastases. This was confirmed by biopsy.

R.G.H., a male subject, aged forty-eight years, in World War I had received an injury to his left shoulder. When it healed, a mole appeared in the scar. Twenty-three years later the mole commenced to grow and ulcerate. Six months later he sought medical attention and was found to have a melanoblastoma with axillary metastases. He died twelve months after enlargement of the mole had commenced, with generalized dissemination.

Hormonal Influences.

Moles seldom become malignant before the age of puberty. In the present series the youngest patient to develop a malignant disease was fifteen years of age.

There were only two cases of malignant moles associated with pregnancy.

L.D. was aged twenty-two years. A small black mole was removed from the hair line in 1930. In September, 1934, she was found to have secondary deposits of melanoblastoma in the supraclavicular lymph nodes. At this time she was six months pregnant. She died three months later with generalized dissemination.

Y.D., aged twenty-six years, had a black freckle on the dorsum of her foot, which had always been present. It commenced to enlarge when she became pregnant two years prior to her admission to hospital. She was found to have inguinal metastases by the time she was admitted for treatment.

Age Incidence.

No age group after the onset of puberty is immune to melanoblastoma. The youngest patient in this series was aged fifteen years and the oldest was aged ninety years. The peak incidence was in the fifth decade in both males and females. In the series published by Macdonald (1948), the peak incidence in cases from the Connecticut State Department of Health was in the sixth decade for males and for females in the seventh.

This earlier incidence of malignant change in the present series could be due to the greater intensity of sunlight.

TABLE I.

Site and Age Incidence in 298 Cases of Melanoblastoma in Twenty Years at Royal Prince Alfred Hospital.

Site.	15 to 20 Years.		21 to 30 Years.		31 to 40 Years.		41 to 50 Years.		51 to 60 Years.		61 to 70 Years.		71 to 80 Years.		81 to 90 Years.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Head and neck ..	1	2	9	1	6	6	9	7	9	6	12	6	10	9	7	—	63	37
Upper limb	—	1	—	4	2	9	9	5	5	4	6	2	4	2	2	1	28	28
Lower limb	6	3	6	12	4	7	9	10	7	6	1	8	1	2	—	—	34	48
Trunk	3	—	3	3	5	2	8	2	9	3	1	—	2	3	1	—	32	13
Genitalia	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2
Anal canal	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Palate	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	2	—
Primary lesion not determined	—	—	—	—	1	—	3	2	3	—	1	—	—	—	—	—	8	2
Totals ..	10	6	18	20	18	24	38	27	34	20	21	17	18	16	10	1	167	131
																	298	

Clinical Recognition of Malignant Change

The transformation of a benign pigmented nævus into a malignant tumour is recognizable by the following criteria: (i) Deepening of the colour—a brown lesion may become blue or black. Often there is a red areola due to increased vascularity of the tumour, and a lesion without very much pigment may be mistaken for an inflammatory condition. (ii) Enlargement of the lesion. If the original nævus was flat, then any lumpiness arising in it, whether pigmented or not, is usually due to malignant change. (iii) Ulceration, whether spontaneous or following minor trauma. This is a fairly constant sign. (iv) The formation of pigmented satellites around a pigmented nævus; this is sometimes the first sign noticed by the patient. In other cases the development of metastases in the regional lymph nodes or in distant viscera causes the first symptoms noticed by the patient.

In a number of cases the patient has not thought to inform the clinician that a wart or mole had been excised some time in the recent past. What had been thought to be a simple papilloma, mole or pyogenic granuloma had not been submitted to microscopic examination. Recurrence or the appearance of metastases has been the first intimation of the real nature of the lesion.

In four cases the patient was submitted to craniotomy and a secondary melanoblastoma was found.

In two cases a second primarily malignant growth has occurred in another site. The new tumour could be distinguished from secondary deposits in the skin by the criteria discussed later in this paper.

Spread of Melanoblastoma.

The spread of melanoblastoma, to begin with, is by the lymphatics to the regional lymph nodes at a fairly early date. Later, when dissemination occurs by the bloodstream, any organ in the body may be involved.

No undoubted case of primary melanoblastoma arising in any region other than the skin, the squamous mucous membranes or the eye has been found in patients examined at Royal Prince Alfred Hospital.

In one case a large melanomatous tumour of the right suprarenal gland was found at autopsy, and only accidentally was it learnt some weeks later that two years previously the patient had had a malignant mole removed from his knee.

In the search for a primary growth the anal canal, the genitalia and the oral cavity must be examined.

It is very difficult to obtain a precise history as to when a mole has become malignant. The average patient, however, seems to die within two years from the onset of the first symptom suggestive of malignant change. Occasional patients have died from widespread dissemination after lengthy periods, as in the following case.

The patient was a male, aged forty years. A mole was removed from his thigh in May, 1938. In May, 1939, metastatic deposits in the lymph nodes of Scarpa's triangle were excised. He died in May, 1947, from generalized dissemination, there being no clinical examination in the intervening period.

Treatment and Prognosis of Melanoblastoma.

The treatment in most cases in the present series has been by simple excision of the local tumour and extirpation of the regional metastases when they become demonstrable. In a few cases the uninvolved regional lymph nodes were removed at the same time as the local growth.

The results of this treatment can be seen in Table II.

TABLE II.

All Patients (155) First Examined between June, 1936, and June, 1946.

Description of 155 Patients.	Males. (73)	Females. (82)	Total.
Patients Excluded from Calculations of Five-Year Survival Rate.			
Number untraced	18	25	43
Dead from other causes within five years while cancer-free ..	9	3	12
Alive and well, less than five years since recurrence	—	1	1
Total	27	29	56
Patients on Whom Five-Year Survival Rate is Based.			
Dead from melanoblastoma ..	41	43	84
Surviving five years or longer without recurrence	5	10	15 (15·2%)
Total	46	53	99

The figures published by Macdonald (1948) from the Connecticut State Department of Health contain cases of uveal melanoblastoma in which the five-year survival period is far greater than that for the cutaneous tumours, being 26·7% for males and 27·8% for females. When her figures are dissected the five-year survival rate for

cutaneous melanoblastomata is 12% (9·4% for males and 15·5% for females).

The five-year survival rate in the present series is similar to that of Macdonald.

In the paper by Pack (1948) published by the New York Academy of Sciences, the five-year survival rate at the New York Memorial Hospital for Cancer and Allied Disease is given as 18% for patients without regional metastases and 15% for those with regional metastases. These figures evidently include uveal melanoblastomata, so that the figures for skin melanoblastomata would probably be similar to those given by Macdonald. However, Pack states that in the fifteen years prior to the publication of his article the practice of dissection in continuity had improved the survival rate by 600%. In following such treatment it is necessary, in cases in which the primary tumour is at a distance from the regional lymph nodes, as in the hand or foot, to disarticulate the relevant limb at the hip or shoulder.

Of the five males who have been free from cancer for more than five years, three had regional metastases when first examined, and one had regional lymph node involvement a year after removal of the primary growth.

Amongst the 10 female patients, three had regional lymph node involvement when first examined and one developed a recurrence in the scar and lymph node involvement fifteen months after excision of the primary growth. These patients are still alive and clinically free from melanoblastoma up to nine years since the metastatic growths were excised.

In view of the figures obtained with conservative surgery, it would seem that the radical mutilations advocated by Pack are not warranted.

Histogenesis of Moles and Melanoblastoma.

Melanoblasts are normally situated between the basal cells of the epidermis. They have dendritic processes, which ramify a short distance amongst the squamous cells. They may be demonstrated by the dopa reaction or by silver staining. With *hæmatoxylin* and eosin stains the nucleus only is well demonstrated and the poorly stained cytoplasm has given rise to the term "clear cells" or "*cellules claires*". The melanoblasts produce melanin, which they give up to the epidermal cells. If much pigment is produced for any reason (without any increase in the number of melanoblasts), histiocytes in the dermis engulf the excess. This is seen in such conditions as lentigo and arsenical pigmentation.

The origin of melanoblasts in human skin is unknown. Whereas migration of melanoblasts from the neural crest to the epidermis can be demonstrated in certain animals, no such migration has ever been demonstrated in human embryos. If migration does take place, the means may be indirect, such as the development of melanoblasts from cells that do migrate—namely, the neurolemmal cells. However, in discussing this problem, Masson (1948) suggests that a rudimentary form of placodal development may be the mechanism by which melanoblasts appear in the skin.

Melanoblasts are different from epidermal epithelial cells and from nervous cells. As Masson points out in the same paper, they are glandular in function. He calls them "cytocrine" to describe their activity in producing a secretion that is discharged into the adjacent epidermal cells.

In the production of a nævus the melanoblasts in the region of the basal layer of the epidermis—that is, the junction of the epidermis and dermis—proliferate. These cells thereby produce a flat, pigmented nævus, which is commonly designated the junction nævus. While in this region the melanoblasts (junction cells) produce or are capable of producing melanin, and are therefore dopa-positive. Excess melanin lies within histiocytes in the dermis. In embryonic life and in young children nævi commence in this fashion. As proliferation occurs the junction cells drop down into the dermis, where their character changes. They become smaller and their nuclei become pyknotic. No longer do they produce melanin, and they are dopa-negative. Nævi which are partly junctional (with dopa-positive melanoblasts at the dermo-epidermal junction) and partly dermal (dopa-negative) are termed compound nævi. These may be raised or even verrucous. At a later stage junctional activity ceases and the nævus is composed only of dermal dopa-negative cells. By adult life most nævi have reached this stage. The melanoblasts in the junctional region now number no more than the normal. No excess pigment is produced, and these nævi gradually fade as the pigment produced while the junction cells were active is destroyed. The fading may take years as a tattoo mark may take years to fade.

In the first decade of life over 90% of moles are junctional, but by the sixth decade junction nævi are rare, and nearly all are of the inactive dermal type.

While the dermal nævus cells can multiply slowly, this activity gradually diminishes, and the nævus becomes more and more fibrous.

No nævus of purely dermal type has ever been observed to become malignant. Although such nævi frequently appear microscopically to contain multinucleate cells with hyperchromatic irregular nuclei, they are essentially benign. However, if there is any persisting junctional component, whether existing as a pure junction nævus or in association with dermal nævus cells, malignant potentialities remain. Occasionally junction nævi arise during adult life, and these may proceed to malignant change.

Every primary melanoblastoma of skin has originated from the melanoblasts in the junction region. Unless the connexion between the tumour mass and the junction layer of the epidermis has been destroyed by ulceration, the absence of such a connexion means that the tumour is secondary to a growth elsewhere, or it is not a malignant melanoma.

Histological Recognition of Malignant Change.

A junction nævus is composed of an increase in number of melanoblasts. This may be a slight increase or there may be clumps of these cells attached to the deeper surface of the epidermis. The cytoplasm of the cells stains very slightly, if at all; but in some cases there is sufficient intracellular pigment to simulate cytoplasmic staining. The cells may be much the same shape as squame cells without intercellular prickles, or they may be fusiform, in which case the cytoplasm is more easily seen. There is no destruction of epidermal pegs or infiltration of the dermis.

In compound nævi with both junction cells and dermal nævus cells a transition between the two may be seen, in which case the non-malignancy of an apparently infiltrating tumour is obvious.

The first sign of malignant change in a junction nævus is an alteration in the individual cells. The cytoplasm assumes a faintly eosinophilic staining reaction, often finely granular. The cells are usually round, rarely fusiform, and larger than the non-malignant forms. Nucleoli are often prominent. Individual cells or groups are found nearer the surface—they have invaded the epidermis; others commence to infiltrate the dermis without any transformation towards dermal nævus cells, and often form pigment. At this stage the rete pegs are often destroyed.

A frankly malignant tumour is usually easily recognizable as such. The danger, and the most common error, is to diagnose malignant change when none exists. Dermal nævi because of their irregular nuclei may be thought to be malignant, but the lack of connexion with the junction region clarifies the position.

A pigmented scar following removal of a pigmented tumour is another source of error. Here the cellularity is entirely due to histiocytes which have ingested pigment, and to the presence of a few inflammatory cells.

Thirdly, the phagocytosis of pigment by the sinus lining cells of the regional lymph nodes may mislead the unwary into a diagnosis of metastatic melanoblastoma.

The Blue Nævus.

The blue nævus does not raise the overlying epidermis. It is usually blue or greyish in colour. Clinically it often simulates a purely junction nævus.

These tumours are found most commonly on the head and face, the dorsum of the hand, the wrist and forearm, and the dorsum of the foot. Other sites can be seen in Table III.

The 42 blue nævi were present in 39 patients, there being three patients having two such nævi. The youngest patient was aged nine years in the present series and the oldest was aged forty-eight years, the maximum number being in the age group twenty to twenty-nine years.

This type of nævus becomes malignant only very rarely. No malignant tumour originating in a blue nævus was found in the present series.

TABLE III.

Site of Tumour.	Number of Cases.
Head	15
Dorsum of hand and fingers	11
Wrist and forearm	6
Dorsum of foot	3
Shoulder	2
Abdominal wall	2
Leg	1
Knee	1
Elbow	1
Total	42

The typical histological picture is that of a pigmented fibroma. Squeezed between fasciculi of collagenous connective tissue are pigmented spindle cells. In more cellular varieties the picture varies from the typical, and an erroneous diagnosis of sarcoma may be made.

The exact nature of the blue nævous is a matter for debate and will not be discussed here.

Juvenile Melanoma.

Juvenile melanoma, a rare tumour, resembles a malignant tumour both clinically and histologically. However, under ordinary circumstances it does not metastasize, and simple excision effects a cure. The fate of an untreated tumour of this nature has not come within my experience.

Eleven such tumours have been encountered. The youngest patient was aged six days and the oldest fifteen years. There were nine such tumours in males and two in females (Table IV).

The histological appearances of these tumours are fairly characteristic. The tumour cells appear to be melanin-producing and are very variable in size. Some may be somewhat fusiform and others round or polyhedral. They are larger than epidermal cells, and some connexion with the junction region can be seen. The unwary will diagnose a malignant tumour because of the polymorphic and hyperchromatic appearances, together with the presence of tumour giant cells, but the recognition of the true nature of this tumour will spare much anxiety.

Other Conditions Clinically Resembling Melanoblastomata.

Basal-Cell Carcinoma.—Pigmented basal-cell carcinomata may cause undue anxiety on clinical grounds, especially if the pigment production is sufficiently great to cause darkening of the surrounding skin and thus simulate a junction nævus with a nodular centre. However, usually the rolled edge is characteristic, and histological examination readily proves the nature of the tumour.

Acanthotic Nævus.—The acanthotic nævus, variously designated seborrhœic wart, senile wart and *verruca senilis*, may occur in the young as well as in the middle-aged and elderly. The histology of this pigmented squamous papilloma is characteristic.

Xanthofibroma.—Xanthofibroma, which is also known as histiocytoma, subepithelial fibroma and sclerosing hæmangioma, may be darkly pigmented because of the hæmosiderin present within the component cells. Histologically it may simulate a sarcoma, but the presence of foamy xanthoma cells and the "curlicue" pattern of the fibroblasts are characteristic.

Summary.

The age and site distribution of 298 melanoblastomata have been discussed. In both males and females the heaviest incidence was in the fifth decade. The head and neck were the commonest sites for males, and in females the lower limb was the commonest site. Owing to the relative infrequency of benign nævi in the extremities and the frequency of melanoblastoma in those sites, pigmented lesions there should be viewed with suspicion.

The five-year survival rate was determined in a group of patients who were first examined in the period 1936 to 1946. The survivors were too few in numbers to have any statistical significance in determining the influence of age and site upon prognosis. Although the radical surgical measures advocated by Pack and others in the United States of America were not practised, the survival rate was comparable with that obtained where such treatment is the rule.

Therapeutic irradiation has not been discussed, as it has no place in the treatment of melanoblastoma.

Regional lymph-node involvement, either when the patient first presents for treatment or subsequent to local excision, does not necessarily mean a hopeless prognosis, as four of the male survivors and four of the female survivors of the ten-year period under discussion had regional metastases and are now alive and symptom-free up to nine years following their last operation.

The diagnostic criteria of malignant change, both clinical and histological, have been discussed. It was not found that any particular histological pattern had prognostic significance. It must be emphasized that tissues removed by operation should always be submitted to microscopic examination, as a lesion of misleading appearance may be melanoblastoma.

TABLE IV.
Juvenile Melanoma.

Males.		Females.	
Age.	Site.	Age.	Site.
6 days.	Heel.	4 years.	Cheek.
10 months.	Cheek.	4 years.	Cheek.
3 years.	Cheek.		
4 years.	Forearm.		
5 years.	Cheek.		
8 years.	Thigh.		
10 years.	Ear.		
12 years.	Thigh.		
15 years.	Back.		

References.

Macdonald, E. J. (1948), "Malignant Melanoma in Connecticut", in "The Biology of Melanomas", New York Academy of Sciences.

Masson, P. (1948): "Pigmented Cells in Man", in "The Biology of Melanomas", New York Academy of Sciences.

Pack, G. T. (1948), "A Clinical Study of Pigmented Nevi and Melanomas", in "The Biology of Melanomas", New York Academy of Sciences.

Legends to Illustrations.

FIGURE I.—Premalignant junction nævus in the arm of a woman, aged forty-one years, who also had a frankly malignant mole in the skin of her leg. She died twenty-eight months later after a cholecystectomy operation without any signs of recurrence. (Hæmatoxylin and eosin, x 100.)

FIGURE II.—Melanoblastomatous nodule arising in a junction nævus. (Hæmatoxylin and eosin, x 100.)

FIGURE III.—The edge of a melanoblastoma, illustrating the malignant proliferation of the junction cells. (Hæmatoxylin and eosin, x 100.)

FIGURE IV.—Benign dermal nævus. There are giant cells present and an appearance of infiltration, but there is no connexion with the epidermis. (Hæmatoxylin and eosin.)

FIGURE V.—Non-metastasizing juvenile melanoma. (Hæmatoxylin and eosin.)

FIGURE VI.—Blue nævus. The appearance is that of a fibroma with pigment cells squeezed between the collagen bundles. (Hæmatoxylin and eosin, x 100.)

ILLUSTRATIONS TO THE ARTICLE BY VINCENT J. McGOVERN.

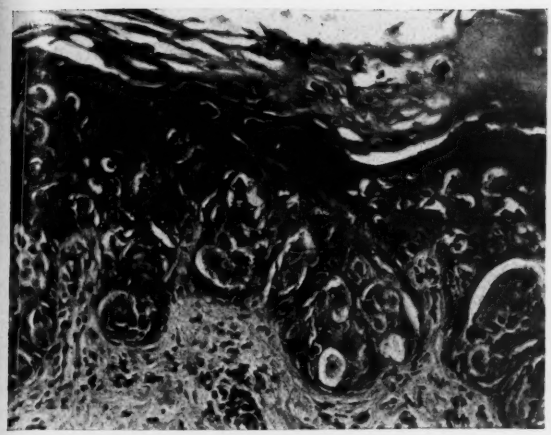

FIGURE I.

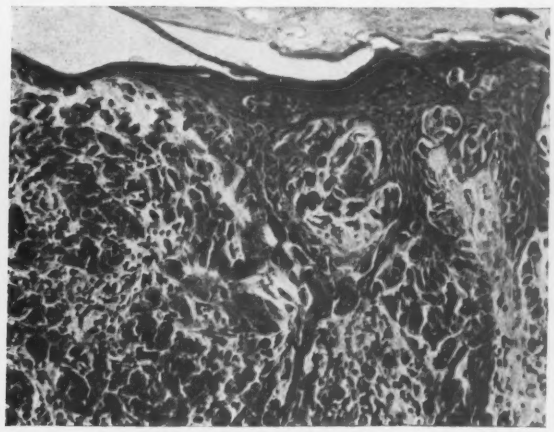

FIGURE II.

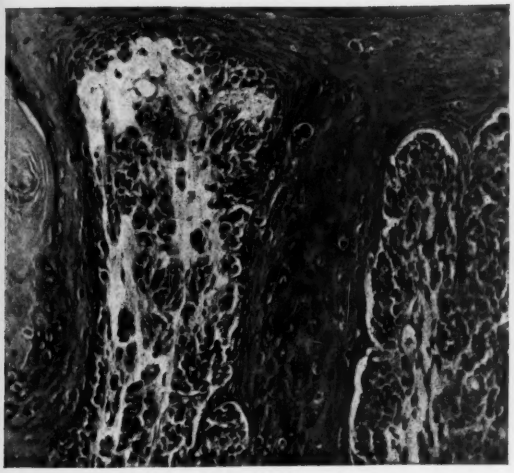

FIGURE III.

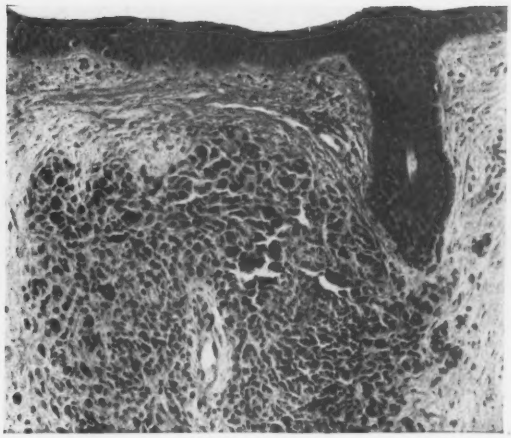

FIGURE IV.

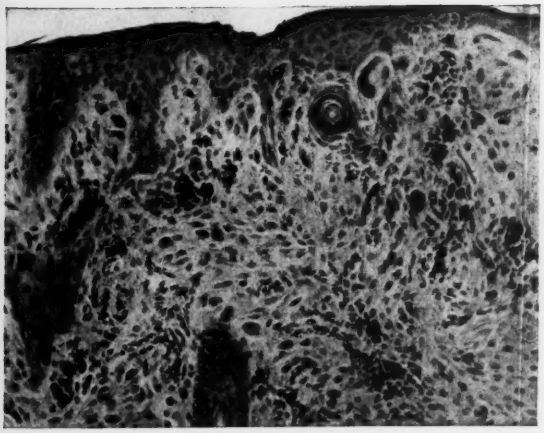

FIGURE V.

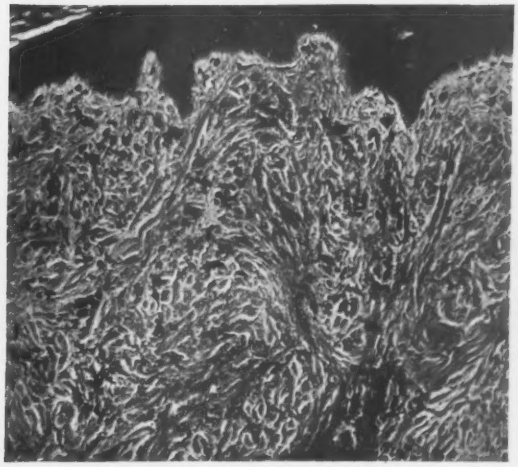

FIGURE VI.

ILLUSTRATIONS TO THE ARTICLE BY V. H. CUMBERLAND.

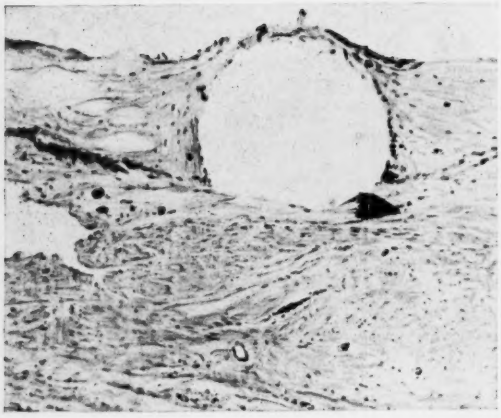

FIGURE I.

Photomicrograph of a section taken from nylon weave implanted in the tissues of a rabbit, showing an absence of inflammatory or foreign body giant cells, a young fibrous tissue stroma between the threads of the nylon, and an endothelial layer identical with peritoneum covering the internal aspect of the weave. This segment of weave had been implanted in the tissues of the rabbit for eight weeks (× 50).

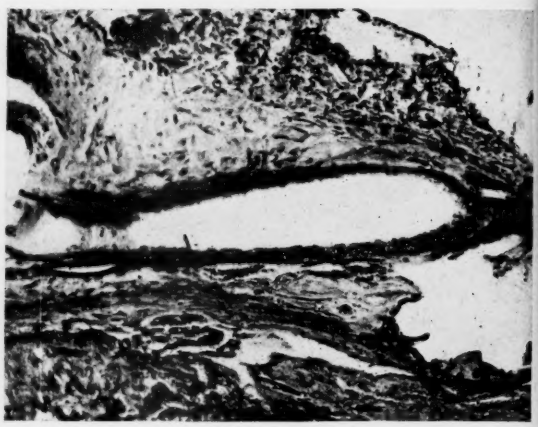

FIGURE II.

Photomicrograph of a section taken from nylon weave implanted in the tissues of a rabbit for a period of nine months. The weave is imbedded in dense fibrous tissue. There is an absence of inflammatory or foreign body giant cell reaction (× 50).

ILLUSTRATIONS TO THE ARTICLE BY E. H. STOKES.

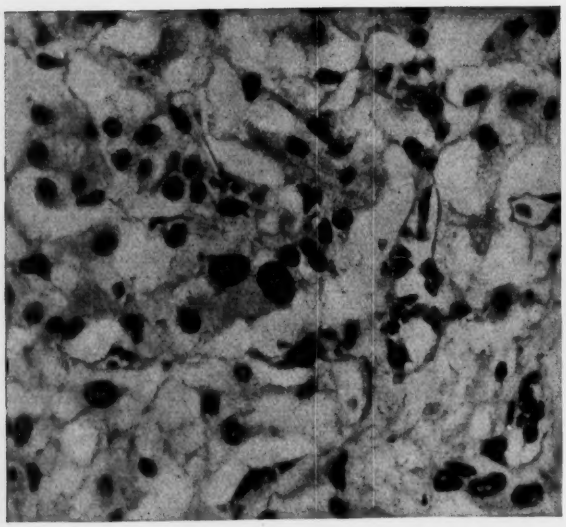

FIGURE IIA.

Microscopic appearance of section from one of the adrenal glands, × 665.

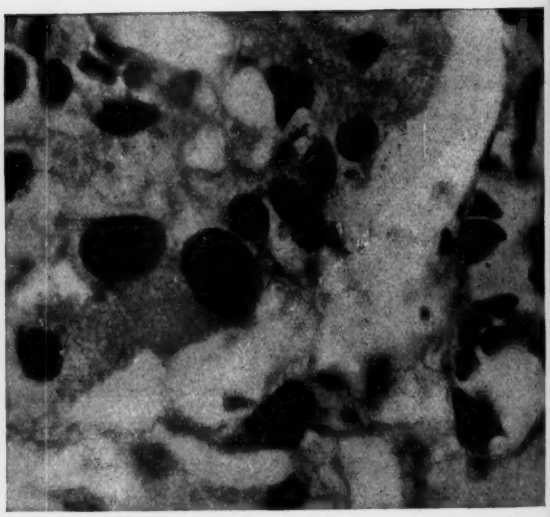

FIGURE IIB.

Microscopic appearance of section from one of the adrenal glands, × 1415.

eave
nine
ssue.
giant

renal

A PRELIMINARY REPORT ON THE USE OF PREFABRICATED NYLON WEAVE IN THE REPAIR OF VENTRAL HERNIA.

By V. H. CUMBERLAND, M.S. (Sydney), F.R.A.C.S., F.R.C.S. (England),

From the Unit of Clinical Investigation, Royal North Shore Hospital, Sydney.

THE introduction of a new technique or material for application to any surgical problem can be justified only by demonstrating that present methods are inadequate. The new method must answer the objections to the older ones, and experimental methods must indicate it to be worthy of clinical trial.

The ideal end result accomplished by surgery in all cases of hernia is the restoration of the normal anatomy of the part. However, tissue destruction or an intrinsically poor quality of the muscles and their sheaths may not allow this reconstruction to be made, or if normal tissues are brought together, tension may favour a recurrence of the hernia. It is in such cases of ventral hernia complicated by tissue deficiency that I believe the use of a supporting prosthesis to be obligatory.

The desirable qualities of a prosthesis for the repair of ventral herniæ are as follows.

1. The prosthesis must be relatively inert in the tissues. These wounds are not infrequently complicated by infection, which may have resulted from a previous operation. If the material used promotes an excessive foreign body reaction, an inflammatory process will occur, which in the presence of even a minor degree of infection will probably result in the rejection of that prosthesis by the host.

2. The material used should be easily sterilized.

3. It should be durable and should provide a supporting framework for a sufficiently long time to allow the formation of a firm and stable fibrous tissue matrix to provide a permanent cure of the hernia.

4. The material should be relatively elastic so that it may respond to deforming forces, such as muscle contraction, coughing and sneezing, without tearing of its attachment to the patient's tissues.

5. It is preferable that the borders of the material should be smooth, to prevent the possibility of trauma or perforation of contiguous viscera or vessels.

6. It should be radio-translucent. This factor I believe to be of importance because: (*a*) radio-opaque material may prevent or interfere with later radiological examination (renal tract or biliary tract); (*b*) it is undesirable for a patient to be aware of the presence of metallic radio-opaque substances in his tissues.

7. The prosthesis should be readily obtainable and economical.

Many materials have been used in the repair of ventral hernia complicated by tissue deficiency. In common use are autogenous fascial grafts, floss silk, silver wire filigree and, latterly, full-thickness skin grafts and tantalum gauze (Lam *et alii*, 1948). None of these materials fulfils all the above requirements.

A skin graft cannot be sterilized, and its durability is questionable. Further, the elasticity of skin is a variable quality; for example, the tendency of some patients to show *striæ gravidarum* is pronounced and in others it is very slight. Tantalum gauze is relatively inelastic, and the edges of the gauze must be rolled back to prevent trauma to adjacent structures. It is radio-opaque, costly and not readily obtainable.

Nylon Weave.

Nylon weave is made of black nylon (gauge 2-0) on a loom by the hospital occupational therapist. It is woven so that it has approximately 600 squares to the square inch and is conveniently made in strips 12 inches long by 4·5 inches wide. One of the properties of nylon weave is that it presents its greatest elasticity to stresses applied in a diagonal direction to the threads of the weave (see the section on operative technique). It is necessary to cut the nylon weave to the desired size and shape with an electrocautery, which seals the ends of the weave and prevents the material from unravelling. In the repair of nearly all ventral herniæ this cutting may be done pre-operatively after a clinical estimation of the defect has been made. If the method should be used in the repair of other types of hernia requiring a prosthesis—for example, direct inguinal hernia—it would be necessary to shape the weave in the operating theatre. In such cases a non-inflammable type of anæsthetic would be necessary.

Experimental Studies.

Defects measuring one and a half inches in diameter were made in the anterior abdominal wall of five rabbits. The defects included fascia, muscles, and peritoneum, and were repaired by stitching an equal segment of nylon weave to the margins of the peritoneum and transversalis fascia. Eight weeks later the wounds were reopened, and it was noted that the inner aspect of the weave was covered with a glistening membrane continuous with the adjacent peritoneum. Few adhesions were present, and these appeared to be at the junction of the peritoneum and the weave. Sections were taken after the nylon had been softened with a mixture of chloral hydrate and phenol. These sections showed an absence of inflammatory or foreign body giant cells; a young fibrous tissue stroma had grown between the threads, and an endothelial layer identical with peritoneum covered the internal aspect of the weave in contiguity with the nylon threads (see Figure I).

Two incisions were then made in the anterior abdominal wall of a sixth rabbit. Into one incision a one and a half inch length of braided silk was placed in the muscles; in the other, a segment of nylon weave measuring half an inch by one inch was similarly sited. The wounds were infected with a mixed culture of *Staphylococcus albus* and *Bacillus coli communis*. Both wounds discharged briskly for seven days, and at the end of this time the silk was extruded. The wound into which the nylon had been

TABLE I.

Patient.	Sex.	Age. (Years.)	Diagnosis.	Site.	Size of Defect. (Inches.)	Duration of Defect.	Date of Operation.	Preliminary Result and Date of Assessment.
E.L.	F.	40	Recurrent hernia.	Paraumbilical.	2·0×2·0	5 years.	6.11.50	Sound, 1.9.51.
A.S.	F.	47	Recurrent hernia.	Lower mid-line.	2·5×3·0	20 months.	9.11.50	Sound, 7.9.51.
H.C.	F.	47	Recurrent hernia.	Lower mid-line.	2·0×2·0	2 years.	8.12.50	Sound, 30.8.51.
J.C.	F.	25	Desmoid tumour.	Upper abdominal.	4·5×4·5	—	17.12.50	Sound, 21.6.51.
H.T.	F.	43	Recurrent hernia.	Lower mid-line.	1·5×1·5	18 months.	25. 1.51	Sound, 1.9.51.
F.W.	M.	74	Primary hernia.	Paraumbilical.	2·0×3·0	24 years.	15. 2.51	Sound, 1.9.51.
I.S.	F.	47	Recurrent hernia.	Lower mid-line.	2·0×3·0	1 year.	4. 4.51	Sound, 1.9.51.

implanted was healed at the end of fourteen days. The nylon weave was excised from the abdominal wall of this rabbit nine months later. Sections taken from this material showed an absence of any foreign body reaction and the weave was embedded in firm fibrous tissue (see Figure II).

After the examination of these sections it was thought that experimentally nylon weave was well tolerated by the tissues of the rabbit and did not produce a foreign body reaction to an observable degree.

Nylon weave is easily sterilized by boiling. It is durable (Douglas, 1949) and radio-translucent. It is relatively elastic. The borders of the material are smooth and the nylon thread from which it is made is cheap and readily obtainable.

Clinical Application.

Eleven patients with ventral abdominal herniæ complicated by tissue deficiency have been operated on, woven nylon being used as a supporting prosthesis. Seven of these patients were operated on a sufficiently long time ago to allow a preliminary assessment.

It will be seen from Table I that of these seven patients five had recurrent herniæ, and two of these five had recurrence for the second time. Both these patients (A.S. and I.S.) at their previous operation had undergone repair of the hernia by full thickness skin graft, and sections taken from these patients showed no evidence of any structures resembling skin, which appeared to have been transformed into inelastic scar tissue. F.W. had primary umbilical herniæ. This patient was an elderly, obese male, and two sacs were present. The quality of the tissues of the abdominal wall was poor.

J.C. was a woman with a desmoid tumour of the right *rectus abdominis* muscle lying just below the costal margin. The peritoneum appeared adherent at operation and was excised with the tumour and a surrounding area of normal muscle, a defect being left in the anterior abdominal wall four and a half inches in diameter. This defect was repaired with two layers of nylon weave, one being sutured to the peritoneum and *fascia transversalis* at the margins of the defect, and the other to the cut edges of the anterior abdominal muscles.

In one case (that of I.S.) convalescence was complicated by wound infection. This subsided after one week and has not recurred.

All wounds were drained with corrugated rubber through a separate stab incision, and a sero-sanguinous discharge was present in all cases for three or four days in the post-operative period.

Operative Technique.

After an anatomical exposure of the sac and the return of its contents to the abdomen, the neck of the sac is transfixed and ligated with chromicized catgut. The sac is then excised. A transverse incision is made in the rectus sheath at the level of the defect, and the rectus muscles are gently separated from the underlying *fascia transversalis*. The nylon weave is placed on the *fascia transversalis* so that the threads of the weave lie diagonally to the sagittal plane of the abdominal wall, in which direction the weave presents the greatest elasticity. The material overlaps the defect by at least three-quarters of an inch in all directions, and is lightly sutured with a few interrupted (gauge 2-0) nylon threads to the underlying *fascia transversalis*. If the anterior rectus sheath can be closed without tension, this is done with a continuous nylon suture. If there is a large defect in this sheath, it is repaired with another layer of nylon weave which is placed so that it overlaps the defect in the anterior sheath by at least three-quarters of an inch in all directions. It is stitched to the anterior sheath with interrupted (gauge 2-0) nylon sutures. In the closure of the skin it is important to avoid the use of defatted flaps. Such skin as has lost its subcutaneous fat and fascia should be excised to achieve a healthy and mobile scar. It has been a routine procedure to drain these wounds for a few days. Penicillin has been given both before and after operation.

Conclusion.

This paper is a preliminary report on the use of nylon weave in the repair of ventral herniæ complicated by tissue deficiency. It is based on experimental studies and clinical application. The desirable qualities of a supporting prosthesis are indicated, and the preliminary investigations have shown that nylon weave fulfils these postulates. It is believed that the results of the clinical application of this method show it to be worthy of a more extensive clinical trial.

Acknowledgements.

I wish to thank the General Medical Superintendent of the Royal North Shore Hospital of Sydney, Dr. Wallace Freeborn, for permission to publish the case reports. I am indebted to members of the honorary medical staff for their cooperation, and to Dr. Colin Graham, morbid anatomist to the Institute of Medical Research, for cutting and staining the sections.

References.

Douglas, D. M. (1949), "Tensile Strength of Sutures. Loss When Implanted in Living Tissue", *The Lancet*, Volume II, page 499.

Lam, C. R., Szilagyi, D. E., and Puppendahl, M. (1948), "Tantalum Gauze in the Repair of Large Post-Operative Ventral Hernias", *Archives of Surgery*, Volume LVII, page 234.

Reports of Cases.

BILATERAL PHÆOCHROMOCYTOMATA.

By E. H. STOKES,
Sydney.

NUMEROUS REPORTS of patients suffering from phæochromocytoma of the adrenal gland have appeared in the medical literature during the past few years, and it may seem superfluous to add yet another example to the ever-increasing list. However, the following case appears to present certain features which are worthy of being placed on record.

Clinical Record.

The patient, a man, aged twenty-eight years, was an accountant by occupation. He was examined for the first time on May 27, 1946, and his chief complaints were of frontal headache of two years' duration and of fatigue of recent origin. He stated that his eyesight was good and that he used to pass urine at night only on infrequent occasions. He had served in the army, but had not been out of Australia. With regard to his previous health, he had suffered from no serious illnesses. On inquiry into the medical history of his family, it was noted that his father had died at the age of fifty-five years from "heart disease" (apparently hypertensive cardiac disease).

On physical examination of the patient it was seen that although his general condition was excellent, he was perspiring freely. His weight was eleven stone four pounds and his height five feet nine inches. The apex beat was situated in the fifth intercostal space, five inches from the mid-line. The second heart sound was accentuated at all areas. No abnormality was noted on examination of the lungs and the abdomen. The kidneys were not palpable. The blood pressure readings were 250 millimetres of mercury, systolic, and 170 millimetres, diastolic. The urine was acid in reaction and of specific gravity 1020, and contained neither albumin nor sugar. The ears, nose and throat appeared normal. The teeth were in good order. On inspection of the *fundi oculorum* double papilloedema was found to be present. However, the visual acuity in each eye was normal. The knee jerks were active. A diagnosis of malignant hypertension was made and the patient was advised that sympathectomy was the best method of treatment for his condition. As he was unwilling to undergo the operation a sedative mixture was prescribed.

On June 18, 1946, he was examined again. He stated that he felt well. However, the blood pressure readings were 200 millimetres of mercury, systolic, and 160 millimetres diastolic. In view of the ocular condition he was referred to Dr. H. B. Carroll, ophthalmic surgeon. Using a mydriatic, Dr. Carroll found that in addition to papillœdema there were striate hæmorrhages and patches of exudate in both retinæ.

On July 18, 1946, the patient complained of increasing fatigue. The blood pressure readings were 200 millimetres of mercury, systolic, and 140 millimetres, diastolic. Triple cardiac rhythm of the protodiastolic type was noted just to the left of the lower end of the sternum.

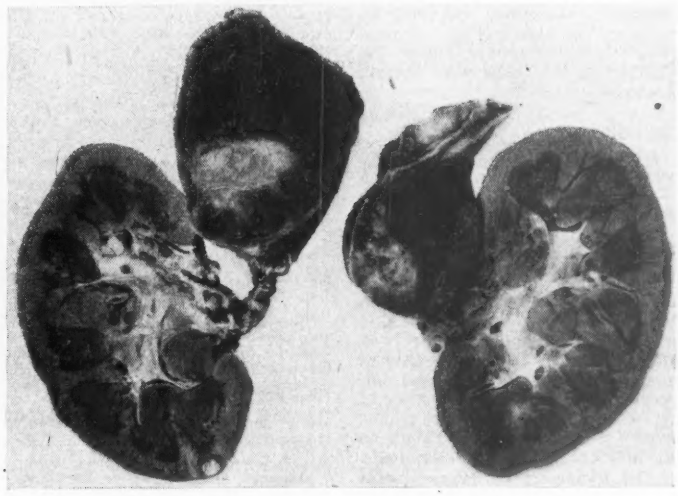

FIGURE I.
Naked-eye appearance of the tumours and the kidneys.

On August 19, 1946, he again complained of headache. A fair cloud of albumin was found in the urine. On September 23, 1946, he reported that the headaches had disappeared.

On December 4, 1946, the protodiastolic cardiac rhythm was still present. The blood pressure readings were 210 millimetres of mercury, systolic, and 150 millimetres, diastolic. The urine contained a fair cloud of albumin, and papillœdema of four dioptres was present on both sides.

On January 13, 1947, he complained that the headaches had returned, but were less severe than previously. The blood pressure readings were 190 millimetres of mercury, systolic, and 160 millimetres, diastolic. A heavy cloud of albumin was found in the urine, and a large mass of exudate had made its appearance near the lateral aspect of the right optic disk.

On February 24, 1947, the blood pressure readings were 190 millimetres of mercury, systolic, and 110 millimetres, diastolic. The urine contained a faint cloud of albumin.

On March 31, 1947, quadruple cardiac rhythm was audible, both the third and the so-called fourth or auricular sounds being heard. The blood pressure readings were 200 millimetres of mercury, systolic, and 160 millimetres, diastolic, and the urine contained a heavy cloud of albumin. Large masses of exudate were present in both retinæ, and star-shaped figures were present in the macular regions.

On April 18, 1947, the patient stated that he had been unable to sleep during the previous few nights, and that he had suffered from frequent bouts of vomiting. On examination of the patient it was seen that he was extremely breathless and that œdema of the legs was present.

On April 19, 1947, he was admitted to Sydney Hospital. He was sweating profusely and was flushed. Breathlessness had increased since the previous day and orthopnœa was present. The blood pressure readings were 210 millimetres of mercury, systolic, and 180 millimetres, diastolic. The liver was enlarged and tender, the edge being palpable about two inches below the costal margin. Coarse crepitations were audible at the lung bases.

Tests of renal function gave satisfactory results.

The blood urea nitrogen content was 11 milligrammes per 100 millilitres, and the blood creatinine content was one milligramme per 100 millilitres. The standard urea clearance was 135% of normal, 73 millilitres of blood being cleared of urea per minute. The urea concentration test gave the following result: before the administration of 15 grammes of urea by mouth the urinary urea content was 2·7% (volume of urine 103 millilitres); one hour after the ingestion of urea it was 3·1% (volume 110 millilitres); at two hours it was 2·9% (volume 60 millilitres); and at three hours the figure was 2·4% (volume 54 millilitres). The serum cholesterol content was 117 milligrammes per 100 millilitres. The urinary deposit obtained after centrifugation contained only an occasional red cell and leucocyte and an odd hyaline and granular cast.

An electrocardiogram was taken and evidence of myocardial involvement was noted. A phonocardiogram confirmed the presence of quadruple rhythm.

After his admission to hospital the patient's condition rapidly deteriorated. Pyrexia of the remittent type was present and he died on April 30, 1947, from congestive cardiac failure.

Autopsy.

An autopsy was performed by Dr. C. E. Marshall. The following were the principal findings. The body weight was nine stone four pounds. An infarct was present in the middle lobe of the right lung and basal congestion of both lungs was present. A slight amount of free fluid was found in the pericardial sac. The heart, which weighed 21 ounces, was grossly enlarged, chiefly from hypertrophy of the left ventricle. The right ventricle and the right auricle were both slightly dilated. A minor degree of fatty change was found in the aorta and in the coronary arteries. The liver was enlarged, its weight being 82 ounces. On examination of the cut surface, gross congestion was noted. The gall-bladder contained a few small pigmented stones. No abnormality was found in the brain. The kidneys were normal in size, but the adrenal glands were greatly enlarged (Figure I).

On microscopic examination of sections from both adrenals evidence of vascular malignant newgrowth was found. There were extensive areas of necrosis. The tumour cells were large in size and polyhedral in shape, with rather pale vesicular nuclei. In some cells golden-brown pigment and small vacuoles were present. Atypical forms and giant cells were found in some areas. The tumour invaded the adrenal cortex, and in one situation tumour cells were found in a structure resembling a lymphatic vessel and in another position in the wall of a vein. The appearances were consistent with the diagnosis of bilateral malignant phæochromocytomata (Figure II).

In the examination of sections from the kidneys it was noted that although the glomeruli were normal in appearance, hyaline thickening of the afferent arterioles was present. Very slight subintimal thickening was seen in a section of one carotid artery. On histological examination of the liver venous congestion was apparent near the centres of the lobules. Sections of the lungs also showed evidence of congestive changes.

Discussion.

The unexpected finding of bilateral phæochromocytomata in this case draws attention to the importance of such tumours in the causation of hypertension. As there are now many reports of the successful operative removal of phæochromocytomata with subsequent disappearance of hypertension, it is obvious that clinicians should make every effort to diagnose the condition.

Although its significance was not realized at the time, one of the most characteristic features of hypertension resulting from a tumour of the adrenal medulla was present in this case—namely, severe drenching sweats. The blood pressure was consistently elevated in this patient, but in many cases of phæochromocytoma hypertension of a paroxysmal type is found. In such instances intravenous injection of a suitable adrenal stimulatory agent, such as histamine, may be helpful in establishing the diagnosis. On the other hand, when the hypertension is persistent (as in this case), the use of an adrenergic blocking agent such as benzodioxane (or piperoxane) is indicated. With either type of test there is always a risk of serious complications, which must be treated by appropriate measures (as outlined by Swan). Urinary assays of adrenal medullary hormone derivatives such as noradrenaline are as yet in the developmental stage, but may be useful diagnostic aids in the future. It is seldom possible to locate the tumour by means of excretion pyelography, but radiological examination after perirenal insufflation in skilled hands may give evidence of diagnostic importance. However, there are some simpler clinical tests which may be pointers to the presence of a phæochromocytoma, such as extreme postural hypotension when the blood pressure is recorded with the patient in the standing position, or a poor response to the cold pressure test. Peripheral vasomotor disturbances are often a feature of the disease. Additional evidence may be obtained from the examination of the temperature chart, in which a low-grade pyrexia is often noted. Finally, it is obvious from the bilateral situation of the tumours and their malignant nature that, even if their presence had been suspected during life, surgical measures would have been most hazardous and unlikely to achieve success. Although bilateral adrenal phæochromocytomata are rare, only 15 having been reported up till 1947, it is necessary to remember that they do occur, especially as there is no doubt that operative attack upon this type of tumour will be undertaken more frequently in the future than it has been in the past.

Summary.

1. A case of bilateral phæochromocytomata is reported.

2. Attention is drawn to the importance of adrenal medullary tumour as a cause of hypertension.

Acknowledgements.

I wish to acknowledge my indebtedness to Dr. A. A. Palmer, morbid anatomist to Sydney Hospital, for advice with regard to the histological appearance of sections removed from the tumours, also to the late Mr. L. W. Appleby for the photograph of the naked-eye appearance of the tumours and the kidneys (Figure I), and to Mr. C. D. L. Wharry for the photomicrographs (Figure II).

References.

Annotation, "Phæochromocytoma", *British Medical Journal* (1951), Volume I, page 465.

Calkins, E., and Howard, J. E. (1947), "Bilateral Familial Pheochromocytomata with Paroxysmal Hypertension; Successful Surgical Removal of Tumors in Two Cases, with Discussion of certain Diagnostic Procedures and Physiological Considerations", *The Journal of Clinical Endocrinology*, Volume VII, page 475.

Crowther, K. V. (1951), "Two Cases of Phæochromocytoma", *British Medical Journal*, Volume I, page 445.

Kositchek, R. J., and Rabwin, M. H. (1950), "Phæochromocytoma Successfully Removed with the Aid of Piperoxan (Benodaine) Hydrochloride", *The Journal of the American Medical Association*, Volume CXLIV, page 826.

Pantridge, J. F., and Burrows, M. McC. (1951), "A Case of Adrenal Phæochromocytoma", *British Medical Journal*, Volume I, page 445.

Swan, H. J. C. (1951), "Phæochromocytoma of Adrenal Gland with Sustained Hypertension", *British Medical Journal*, Volume I, page 440.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Shore: The Sydney Church of England Grammar School: The Foundation and First Headmastership Viewed from the School's Sixtieth Year", by E. R. Holme, O.B.E., M.A., with a foreword by His Grace the Most Reverend the Archbishop of Sydney; 1951. Sydney: Angus and Robertson. 8½" × 5½", pp. 168, with 38 illustrations.

The scope of the book is stated in the subtitle.

"History of Medicine in Ireland", by John Fleetwood, M.B., D.P.H.; 1951. Dublin: Browne and Nolan, Limited. 8½" × 6", pp. 432, with 17 illustrations. Price: 21s.

Intended primarily for non-medical readers, but also for medical persons, especially those studying medicine in Ireland.

"An Atlas of General Affections of the Skeleton", by Thomas Fairbank, D.S.O., O.B.E., M.S., Hon. M.Ch. (Orth.), F.R.C.S.; 1951. Edinburgh: E. and S. Livingstone, Limited. 10½" × 7", pp 432, with 510 illustrations. Price: 55s.

The book consists of 62 chapters dealing with different diseases and syndromes.

"Aids to Physiology", by Henry Dryerre, Ph.D., M.R.C.S., L.R.C.P. (London), F.R.S.E.; Fourth Edition; 1951. London: Baillière, Tindall and Cox. 6½" × 4", pp. 334, with 66 text figures. Price: 7s. 6d.

A member of the "Students' Aids Series" founded in 1876.

"Modern Dietary Treatment", by Margery Abrahams, M.A. (Oxon.), M.Sc. (Columbia University), and Elsie M. Widdowson, D.Sc., Ph.D. (London); Third Edition; 1951. London: Baillière, Tindall and Cox. 8" × 5½", pp. 362. Price: 21s.

The second edition was published in 1940.

"A Handbook of Surgery", by Reginald C. B. Ledlie, M.B., B.S. (London), F.R.C.S. (England), and Michael Harmer, M.A., M.B., B.Chir. (Cantab.), F.R.C.S. (England); 1951. London: Baillière, Tindall and Cox. 8" × 5½", pp. 542, with 56 text figures. Price: 21s.

Intended to be "a concise account of modern surgical practice" for the student.

"Clinical Allergy: A Practical Guide to Diagnosis and Treatment", by Samuel J. Taub, M.B., F.A.C.P.; Second Edition; 1951. New York: Paul B. Hoeber, Incorporated. 9½" × 6½", pp. 282. Price: $4.50.

Intended for the general physician as a guide to diagnostic and therapeutic measures.

The Medical Journal of Australia

SYDNEY, SATURDAY, FEBRUARY 2, 1952.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: surname of author, initials of author, year, full title of article, name of journal without abbreviation, volume, number of first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

A STUDY OF PHYSICAL DISABLEMENT.

A LITTLE more than three and a half years ago (May 29, 1948) the placement of disabled workers was discussed in these columns. On that occasion attention was drawn to an article appearing in the *International Labour Review*, which dealt with certain important aspects of the problem. The main theme of the contribution was that two types of adjustment were required if placement was to be successful. The first was a mental adjustment of the worker to his future job, and the second was a correlation between the physical demands of the job and the physical condition of the candidate. It was stated that both requirements had to be fulfilled if failures were to be avoided, and it was hard to say which of the two was the more important. On that occasion also previous references to the subject in these columns were enumerated. To the important discussions that have taken place on the subject, another has been added. Mrs. Joan Clarke, who had carried out research for Lord Beveridge, has continued her work since Lord Beveridge produced his work entitled "Voluntary Action". She has now published "Disabled Citizens", and Lord Beveridge has written an introduction to it.[1] In the foreword four general points are made. These sum up much that has been written on the subject, and though they may be regarded as obvious, it is as well that they should be reproduced. In the first place, prevention of disablement is as important as cure or alleviation. Secondly, provision of material resources in a community which has advanced as far as Britain on the road towards economic equality, must depend far more than in the past on money from public sources. Thirdly, material resources are only part, and the least important part, of what is needed; more important is the readiness of individual citizens to take the care of the physically handicapped as a vocation. Finally there is, particularly in regard to epileptics, an urgent need for widespread change of public attitude from heartlessness and a spirit of segregation to one of allowing the sufferers the full association with their fellows which is in many cases possible. In our discussion in May, 1948, the aim of placement was stated to be "the employment of the disabled person in a job which he has the ability to do as efficiently as his able-bodied fellows, without being a hazard to himself or jeopardizing the safety of the others, and without the possibility of aggravating his own disability". Since disabilities and handicaps present a wide variation in different individuals, it is well to refer to at least two of the definitions of the terms "handicapped" and "disabled" that are given by Clarke. From the employment angle, the *Disabled Persons (Employment) Act*, 1944, of Great Britain, states: "The expression 'disabled person' means a person who, on account of injury, disease, or congenital deformity, is substantially handicapped in obtaining or keeping employment, or in undertaking work on his own account, of a kind which, apart from injury, disease or deformity, would be suited to his age, experience and qualifications. . . . The expression 'diseased' shall be construed as including a physical or mental condition arising from imperfect development of any organ." Another medical definition comes from Dr. Winthrop Morgan Phelps. He classifies handicaps in four groups. The first comprises handicaps of motion, and includes all forms of crippling. In the second group are handicaps involving special sense organs, such as sight, hearing and sensation. The third group includes mental handicaps. The fourth group is a large diffuse group of functional and organic handicaps, and includes conditions such as heart disease, either acquired or congenital, kidney disease, tuberculosis and so on. Clarke's classification is made in terms of social action. It includes six groups of persons: (i) Those with a reasonable expectation of life, who have permanent or recurrent or progressive limitation of mobility, use of limbs or total effort. (ii) Epileptics. (iii) Persons suffering from neurosis and psychosis. (iv) Persons suffering from digestive and similar disorders. (v) The deaf. (vi) The blind. Clarke omits all discussion of blindness, of digestive and similar disorders, and of neurosis and psychosis.

Some of the general considerations discussed by Clarke must be mentioned. In the first place, attitudes are extremely important, and it is necessary that the affected individual shall have a satisfactory orientation himself, and he needs to find unemotional acceptance amongst his family, friends and associates. Again, any programme of work for a handicapped person should be a total programme, taking account of the individual's age, personality, intelligence, education, skills and potentialities. Some difference of opinion may arise in regard to the persons who are to be included in this work. Clarke refers to two men who suffered from disseminated sclerosis, and points out that in their cases a fund of energy was wasted and intelligence was frustrated. It is admittedly difficult to deal with such persons in a satisfactory way, and to prevent waste of energy and frustration. Clarke is no doubt right when she states that the argument that many of these persons can for some years use their residual capacity for productive work should not be taken as a "senseless argument" that all persons with all progressive diseases should be included. She writes that only those with a reasonable expectation of life, and for whom one can

[1] "Disabled Citizens", by Joan Simeon Clarke, with a foreword by Lord Beveridge; 1951. London: George Allen and Unwin, Limited. 9" × 6", pp. 238. Price: 16s.

assume prolonged residual capacity, are relevant. It will be interesting to know what is regarded as a reasonable expectation of life. Obviously it takes some time for a person to overcome his handicap and to become happy, productive and self-reliant. Clarke asks a rhetorical question, whether the trouble of trying to attain the goal is worth while, when after all has been done the handicap is still a serious limitation. She points out that it would be tempting to say that the cost is out of proportion to the expected productivity of heavily handicapped persons, that humanitarian and Christian feelings have run beyond the bounds of reason, that so much care should be lavished only when there is likely to be reasonable return in output. She will have none of this. When the expectation of life is obviously small, efforts must still be made to give the person concerned an outlook on life and a place in society that are as nearly normal as possible. Sometimes, no doubt, what is done would be better termed occupational therapy. A great deal will depend on whether the disability is congenital or acquired, and if it is acquired, how long it has been in existence and what progress it has made. When the disability is a progressive disease, such as disseminated sclerosis, the patient can in the early days of the malady be taught to make preparations for the distressful days that come at the end of it. Persons with disseminated sclerosis (the disease mentioned by Clarke) are known to be living in our midst, doing full-time sedentary work in a semi-public position with *sang-froid* and with the greatest courage. Clearly no hard and fast line can be drawn between attempts to overcome the disability and its unquestioning acceptance. A decision will have to be made in every individual case, and as far as medical practitioners are concerned the decision will have to be made with attention riveted on the patient's welfare and happiness and not on the state of the public or other purse.

Returning to some of the conditions discussed by Clarke in detail, we note her insistence on the early treatment of infants suffering from cerebral palsy. She quotes Eirene Collis, of Carshalton, England, and Jean Macnamara, of Melbourne, as emphasizing these views. She draws attention to the need for diagnostic and treatment facilities for infants and young children, and suggests that new treatment centres should be established in Great Britain. She shows that a great deal can be done for these children, and quotes a delightful story of a medical specialist in the treatment of cerebral palsy who was himself an unmistakable athetoid, and who arrived at a hospital to conduct a demonstration clinic. He was directed to the patients' entrance. When this story was subsequently told to the patients whom he was examining, it greatly heartened them. The chapter on epilepsy is full of interest. Once it is known that a person is an epileptic, he is likely to have difficulty in maintaining his employment. We read that many of the 100,000 epileptics estimated to be in Great Britain follow their trades or professions without their colleagues being aware that they are epileptics. Epileptic persons fall into two groups. The first comprises those who can live in the community, the second those who cannot. By modern therapy the numbers of the former group can be increased, and fewer epileptics are left for institutional care. With modern treatment many of those who would at one time have suffered a gradual mental deterioration can live as normal citizens, their intellects unimpaired, either without fits or with few fits, or with fits lighter than they would otherwise have been. Clarke writes that much propaganda is needed to convince people that epilepsy does not imply mental defect, that it need not induce mental decay, and that it is not a sign of a degenerated stock. This is an enormous subject and worthy of a special discussion. It must suffice to record Clarke's insistence that vocational training is particularly advantageous for epileptics. "As long as they are subject to fits they are, even if unnecessarily, the marginal people who are apt to be discharged whenever there is surplus labour. If, however, they are skilled in their occupations, they can use their ability to cancel out the economic disadvantage of their handicap."

Omitting reference to Clarke's discussion on tuberculosis and deafness, we note some of her remarks about children, employable adults and dependent adults. All her suggestions are first rate, but we fear that some of them must be regarded as Utopian. With our present-day shortage of hospital beds for ordinary illness and of accommodation for patients in mental hospitals, it seems futile to talk about the provision of temporary foster-homes for sick children needing prolonged nursing care, and about more homes for the disabled. The provision of mobile orthopædic clinics in rural areas should not be difficult, nor should it be impossible to make in-patient treatment or convalescence long enough and thorough enough to minimize the need for subsequent admission of children elsewhere. The extension of a home-teaching programme, covering all children home-bound or awaiting vacancies, or absent from school for prolonged periods, is desirable but difficult. The provision of sheltered workshops for employable adults, to be used additionally as places of industrial convalescence by workers gathering strength for return to normal industry after illness and accidents, is quite possible and could surely be arranged as an economic proposition. The establishment of special library services for the disabled with librarians visiting them in their homes may be described as a dream which many people would like to see come to pass. The same may possibly be said of the suggestion that ground-floor dwellings should be a priority for families having a disabled member whose mobility would be increased by dwelling on the ground floor.

The final point in Clarke's readable and excellent book to which we would draw attention is her idea—an idea transferable to Australia—that a central body should be established, which would give leadership and coordination in this matter. She thinks that neither the Central Council for the Care of Cripples nor the British Council for Rehabilitation is suitable. The one has not the necessary status and authority and the other has a specialized range of activities. The proposed new body, she states, should not be a council in the sense of being hamstrung by affiliations, nor should it seek distinction by covering its notepaper with famous names. What is wanted in her opinion is a really efficient office run by properly salaried and qualified persons in a suitable building—"no hole and corner muddling"—and this should be guided by a "top line working committee and by a few carefully appointed sub-committees". There is a bluntness about this and a certain *naïveté* which has its appeal. Mrs. Joan Clarke has made an interesting contribution to this subject.

Current Comment.

QUININE AND ITS DEVELOPMENT.

IN his "Annual Post-Graduate Oration", delivered in the Great Hall of the University of Sydney on March 16, 1949, R. Scot Skirving, discussing the debt clinicians owe to the ancillary sciences, referred to "the four bedrock pillars of medical wisdom"—anatomy, physiology, chemistry and pathology.[1] The justice of this classification is well brought out in relation to chemistry when we consider the history of the development of quinine. The story is fascinating, but it is unnecessary in this place to tell it in detail. One aspect of it has been brought to notice by the publication of a special number of *Revue du paludisme et de médecine tropicale* in honour of two French chemists whose work was of the utmost importance—Joseph Pelletier and Joseph-Bienaimé Caventou.[2] The occasion which called for the appearance of this special number was the unveiling on March 2, 1951, in Paris, of a new monument to their memory, and here a slight digression is pardonable to tell what happened to the first one. On August 7, 1900, a monument to Pelletier and Caventou was unveiled; subscriptions had been received from many countries outside France, for the work of the two French chemists was recognized as of international importance. On that occasion the secretary of the organizing committee, in his speech, used these words: "*L'image de Pelletier et Caventou restera ici pendant de longs siècles . . .*". Forty-two years later, during the Nazi occupation of Paris, the two bronze statues were sent to be melted down, and as the secretary of the present committee puts it in his account of the affair, "*. . . seul un socle nu rappelait à la foule indifférente qu'avant-guerre quelque personnage célèbre devait avoir là sa statue!*" The new monument, the work of the sculptor Poisson, is different from the previous one, being allegorical in type.

Pelletier, born in 1788, and Caventou, born in 1795, were both pharmaceutical chemists with their own businesses, as well as being associate professors in the pharmacy school. Both became members of the *Académie de médecine*. Pelletier instituted the study of mineralogy, and Caventou instituted the first course in organic chemistry at Paris. Professor Ch. Bedel[3] tells us that at the beginning of the nineteenth century it was thought that organic substances could be only acid or neutral; no one thought that any might be basic, and consequently no one dreamed of the important therapeutic part that might be played by alkaloids. Until the time when Pelletier and Caventou undertook their research, quinquina bark had been studied by many people, but no positive conclusions had been put forward about its constituents. Opium also was being studied, and in 1803-1805 morphine was isolated by Friderich Sertürner; he also concluded "that this was an organic alkali and that similar salts might represent the active principle of plant remedies".[3] In 1810 Gomez, of Lisbon, isolated cinchonine. Ten years later Pelletier and Caventou showed that cinchonine contained two distinct crystallizing alkaloids which they named quinine and cinchonine. At that time Pelletier was aged thirty-two years and Caventou only twenty-five years. Investigation soon proved that quinine was the more active against malaria. At first a certain amount of scepticism was shown, but gradually the use of quinine gained ground; there is no need to attempt in this place to describe its immense importance in the control of malaria. Certainly it has been superseded; but for many years it offered the only hope. We are told that "altogether more than a score of alkaloids have been found in cinchona barks and their derivatives are many . . .".[4]

Both Pelletier and Caventou were men of the highest principles; they made no attempt to keep for themselves the advantages to be gained from the manufacture of sulphate of quinine, but made the process freely available. Naturally they did other valuable work, but their discovery of quinine concerns us chiefly. Pelletier died at the early age of fifty-four years; Caventou died in 1877, at the age of seventy-nine years. Their work belongs not only to France but to the whole world.

[1] *Bulletin of the Post-Graduate Committee in Medicine, University of Sydney*, April, 1949.

[2] *Revue du paludisme et de médecine tropicale, numéro spécial consacré à J. Pelletier et J.-B. Caventou*, October, 1951.

[3] J. Jaramillo-Arango, "The Conquest of Malaria", 1950, page 87.

[4] H. H. Scott, "A History of Tropical Medicine", Second Edition, 1942, page 230.

GASTRIC DIVERTICULA.

GASTRIC DIVERTICULA are not common, but they are of considerable clinical significance and are probably often overlooked. According to E. D. Palmer,[1] a misleading tendency exists to think of gastric diverticula in terms of diverticula elsewhere in the gastro-intestinal tract, this being the result of unfamiliarity with the stomach lesion, and therefore many of the problems presented have been over-simplified. For this reason he has prepared a brief but informative review that can be studied with advantage by anyone wishing to obtain a clear picture of the several conditions that are grouped as gastric diverticula and may present a puzzling clinical picture. Palmer points out that the conventional and proper classification of gastric diverticula divides them into the true and probably congenital type, characterized by retention in the pouch of all the usual layers of the gastric wall, and the false or acquired type, which develops secondarily to extrinsic traction or intrinsic pulsion, usually with consequent loss of the *muscularis propria*. Many gastric and extragastric conditions may be the basis of false diverticula; they include gastric ulcers, surgical artifacts and certain intramural stomach tumours. The clinical and pathological significance of this type of diverticulum will be that of the underlying disease. True gastric diverticula, with which Palmer is more concerned, form a definite group. They are generally regarded as being congenital, but their exact origin is obscure. In the majority of cases they occur in the "usual" position, a point on the posterior stomach wall about two centimetres below the œsophagogastric junction and three centimetres from the neighbouring lesser curvature, but a suggestion that there is an inherent anatomical weakness at the point has not been proved. Palmer has found 412 valid reported cases of true gastric diverticula and is able to show that the lesion should be considered a potent source of upper abdominal symptoms. More particularly, it becomes clinically important in middle life and affects more males than females. The main symptoms are simple epigastric or lower chest pain, and various complex dyspepsias. Clinically the diagnosis cannot be more than vaguely suspected. In almost all cases the radiologist is responsible for finding the lesion; but gastroscopy may be important, sometimes in initial diagnosis, more often in further investigation of the exact nature of the condition. In the matter of treatment Palmer considers that both methods and results are difficult to appraise because of the frequent coexistence of other upper abdominal disease and, sometimes, a question of the actual symptomatic significance of the treated diverticulum. However, surgical amputation is regarded as the treatment of choice; simple invagination or subtotal gastrectomy may be indicated in particular cases. Examination of true gastric diverticula shows all gastric layers to be present and intact. The lining mucosa often has changes suggestive of trauma induced by stasis and local muscular activity. There appears to be no important tendency towards carcinogenesis, but this point is not finally appraised. Small isolated benign tumours have been found within true diverticula rather frequently, and aberrant pancreatic rests may be associated with the lesion, but there is little to suggest that the two conditions are causally related even though they may have a common causal basis. A good deal is yet to be determined about the condition, especially its pathogenesis, but its diagnosis need not present a great deal of difficulty.

[1] *International Abstracts of Surgery*, May, 1951.

Abstracts from Medical Literature.

RADIOLOGY.

Radiological and Pathological Aspects of Tuberous Sclerosis.

DAVID SUTTON AND L. A. LIVERSEDGE (*Journal of the Faculty of Radiologists*, January, 1951) state that the presence of multiple discrete intracranial calcifications is a radiological finding which should at once suggest the diagnosis of tuberous sclerosis. Although there are numerous other causes of intracranial calcification, in practice toxoplasmosis is the only one which can give rise to a picture of similar multiple lesions. Differentiation should be made clinically by the almost constant presence of chorioido-retinitis in toxoplasmosis. The latter also frequently shows linear flakes of calcification of a type not seen in tuberous sclerosis. Two cases of tuberous sclerosis, both complicated by hydrocephalus, are presented with a report of the clinical, radiological and autopsy findings. The radiological findings previously recorded in tuberous sclerosis are reviewed, and the relationship of the radiological to the pathological lesions is examined. The generalized nature of the disease and its protean clinical and radiological manifestations are emphasized. Radiological and pathological evidence is offered to suggest that tuberous sclerosis should be regarded as a widespread dysplasia of both mesodermal and ectodermal tissues.

The "Recumbent Œsophagogram".

S. SCHORR, F. DREYFUSS AND A. SCHWARTZ (*Radiology*, August, 1951) state that the demonstration of a localized indentation of the barium-filled œsophagus at the proper level with the patient in the recumbent right anterior oblique position is an early, possibly the earliest, X-ray sign of left atrial enlargement. Evidence furnished by the "recumbent œsophagogram" precedes other X-ray changes of left atrial enlargement, such as straightening of the left upper heart border, retrodisplacement of the œsophageal line in the erect position, elevation of the main left bronchus *et cetera*. In the presence of a localized indentation of the barium-filled œsophagus with the patient in the right anterior oblique recumbent position, organic heart disease has to be considered. A diagnosis of functional murmur may thus be ruled out, except in an occasional case of valvulitis, when left atrial enlargement is not present. This method of examination alone may at times establish the diagnosis. Its main use, however, is as an adjunct in doubtful cases.

Angiocardiography in Cyanotic Heart Disease.

ROBERT N. COOLEY (*Journal of the Faculty of Radiologists*, April, 1951) states that the defects which comprise the tetralogy of Fallot can usually be demonstrated by angiocardiography. The appearance of an area of stenosis in the outflow tract of the right ventricle must be interpreted cautiously unless the phase of the cardiac cycle is known. Frequently no definite area of obstruction can be demonstrated by the methods now in use, and the failure to find such an obstruction does not exclude a diagnosis of tetralogy. The size of the pulmonary artery beyond the point of stenosis can be determined with a fair degree of accuracy. However, when the distal artery fails to be visualized, it is wrong to assume that the artery does not exist. Occasionally it will be large enough to permit the establishment of an artificial ductus even though it is not visible during angiocardiography. The presence of numerous small collateral vessels in the hilar regions of the lungs is strong evidence against the presence of a distal pulmonary vessel of adequate size. However, surgical exploration is still unfortunately necessary in a small number of cases in order to determine the true state of the pulmonary artery. The overriding aorta is uniformly demonstrated; it is usually enlarged and has an anterior position as seen in the lateral view. In those few cases in which the position of the aortic arch cannot be determined by fluoroscopy, angiocardiography provides reliable and definite information concerning its course. In primary pulmonary stenosis with intact ventricular septum, there is quite frequently a dilatation of the pulmonary artery of varying degree just beyond the stenotic valve. In this dilated artery the contrast substance lingers and may be demonstrated by angiocardiography for periods of six to eight seconds; the normal pulmonary artery will empty in two to three seconds. The more distal portions of the pulmonary artery are small, and the lungs have a radiolucent bloodless appearance. The stenotic valve in this condition is rarely demonstrated by angiocardiography. Although the dilated proximal pulmonary artery in which contrast substance stagnates is indirect evidence of pulmonary stenosis, the appearance may be seen in the Eisenmenger complex in which there is a peripheral obstruction to the pulmonary blood-flow. An overriding aorta is usually demonstrated in the Eisenmenger complex, and its absence would favour a diagnosis of primary pulmonary stenosis; also, an interauricular septal defect is not usually associated with the Eisenmenger complex, but not infrequently is seen in cases of primary pulmonary stenosis. The most reliable information is obtained from the passage of a catheter from the right side of the heart into the pulmonary artery; as the catheter passes the stenotic valve the pressure drops significantly. Unfortunately it is not always possible to extend the catheter beyond the stenotic valve, and recourse must be had to some other means of investigation such as angiocardiography. The aorta in primary pulmonary stenosis fills with contrast substance early in the course of the examination only when there is a concurrent interauricular septal defect; the defect and left auricular filling can usually be demonstrated at the same time. The aorta as seen in the lateral view usually has a more posterior position than is seen in the tetralogy of Fallot, in which it overrides the ventricular septum. In tricuspid stenosis or atresia with poorly functioning or non-functioning right ventricle, the failure of the right ventricle to fill with contrast substance is easily demonstrated; this is frequently most closely shown in the lateral projection. It should be remembered that a failure to visualize the filled right ventricle is not positive evidence of a tricuspid atresia. The right ventricle may be small or absent because of some other anomaly; or the ventricle may be in systole. This latter possibility may be appraised by comparison with the size and state of contracture of the left ventricle. The interauricular septal defect in cases of tricuspid atresia can at times be directly demonstrated, and its size can thus be closely estimated. The speed with which the contrast substance enters the left side of the heart gives further inferential evidence as to the size of the defect. When the aorta is completely transposed and originates entirely from the right ventricle, as in transposition of the great vessels, it occupies an anterior position. This is best seen in the lateral angiocardiograms, in which at times the ascending aorta may lie just beneath the sternum.

PHYSICAL THERAPY.

Endometriosis: Its Management and End Results.

R. A. HAYS AND V. V. PORTMANN (*American Journal of Roentgenology and Radium Therapy*, November, 1951) review 142 cases of endometriosis encountered at the Cleveland Clinic during the period from 1939 to 1949. In this series, 42 patients (29·5%) were treated by radical surgery. Conservative operations were performed on 40 patients (28·1%); these patients were younger than those who had radical surgery, the average age being 32·8 years. Deep X-ray therapy was given to 34 patients (24·1%). The authors state that the administration of 500*r* to 600*r* to the ovaries in the course of a week is necessary to ensure permanent amenorrhœa. Most patients have at least one menstrual period after the treatment; they should be forewarned of this possibility and told that the effects of treatment will not be immediate. The writers believe that temporary amenorrhœa is undesirable. They state that in this series deep X-ray therapy produced the best results with the least morbidity, and was satisfactory in 97% of cases. Menopausal symptoms following irradiation are best treated conservatively. The medical treatment of endometriosis with hormones has, in the experience of the authors, been disappointing.

Advances in Clinical Radiotherapy.

RALSTON PATERSON (*American Journal of Roentgenology and Radium Therapy*, October, 1951) analyses the progress made in the practice of radiotherapy since 1937. He states that much of the great progress made stemmed first from developments in Great Britain and from the British School of Radiotherapy. Knowledge of the response of different types of malignant disease has been gradually consolidated until it has become a relatively exact practice. Cure by irradiation of accessible early squamous-cell carcinoma has been made easier and more certain than cure by surgical excision. This is true of cancer of the mouth and of the uterine cervix, and of most cancers of the skin. It is also true of many other types of cancer perhaps less common. There is also a vast improvement in the facilities for palliation.

There has also been a great diminution of the incidence of radionecrosis, and this has been almost mastered by the accuracy of modern methods in good centres. The closer collaboration of the surgeon and the radiotherapist, best exemplified in the case of breast cancer, has been an important advance. The change in policy in the treatment of those growths known to be radiosensitive—towards the irradiation of much larger volumes of tissue—has increased the scope of palliation of these diseases, and has brought into the range of curable tumours (when the disease is moderately limited in extent) many cases of lymphosarcoma, reticulosarcoma, *seminoma testis*, Wilm's tumour and medulloblastoma. It has now been learned how to deliver accurately a predetermined dose of radiation to tumour-bearing tissue whether by X rays or by radium. These procedures entail a high degree of painstaking technical work and the close collaboration for each case of a specially trained physicist. The centralization of the work into well-organized centres has been found in Great Britain to improve medical efficiency, to make the greatest use of plant and equipment and of medical experience, and to be essential for the satisfactory training of the young specialist. Consideration of results of treatment for individual diseases from various centres over the last twenty years cannot fail to convince the observer that there has been steady improvement. At the Holt Radium Institute, Manchester, consideration of all cases of cancer of the mouth, treated by either radium or X rays from 1928 to 1945, shows an increase in five-year net survival from 24% for cases treated in the years 1928-1930 to 40% for cases treated in the years 1943-1945. There are also the facts in Great Britain that of the total number of patients with cancer treated, a far larger number are treated by radiotherapy than by surgery, and there has been steady increase over the years in the number of cancer patients sent for radiotherapy. The newer radiation agents, including supervoltage therapy and radioisotopes, will, it is hoped, bring other types of malignant disease under control in the future.

Physical and Clinical Aspects of Supervoltage Rotational Therapy.

H. F. HARE, J. G. TRUMP *et alii* (*American Journal of Roentgenology and Radium Therapy*, October, 1951) state that two of the more significant trends in radiation therapy today are the utilization of X rays produced at higher voltages and the more adequate and uniform administration of this radiation through multiple fields or by the rotational method. Their paper deals particularly with the treatment of tumours of the head and neck by 2,000,000-volt supervoltage therapy, the rotational method being used. For the general cancer problem it is considered that the optimum radiation qualities are attained broadly in the 2,000,000-volt to 5,000,000-volt range. Such radiation has improved qualities of penetration, freedom from scatter and skin tolerance at the portal of entry, and a low ratio of bone to soft tissue absorption. The quality of the radiation at 2,000,000 volts is identical with that of the γ rays of radium, and the intensity of the beam from a tube at this voltage corresponds to that of 5000 grammes of radium. The uniform irradiation of a volume of tumour-bearing tissue with minimal energy absorption elsewhere can often be best accomplished by rotating the patient slowly about an axis through this region and accurately directing towards it a well-defined beam of suitable shape. The patient is placed in a vertical position, sitting or standing, in all cases thoroughly supported by elements on the rotating stand, so that the location of the tumour axis and elevation can be determined and maintained. There is a single rigid vertical steel column, with which the vertebral column of the patient is in contact, and he is provided with supporting attachments at appropriate levels, such as the thigh, waist, shoulder and head. It is believed that the patient's position can be maintained within a few millimetres of its original location during the treatment period. Details of technique are described in the treatment of tumours of the pituitary, cancer of the larynx and other tumours of the head and neck. Radiographic verification is carried out with the therapy tube, to ensure the accuracy of positioning in all directions. The usual plan is to deliver 6000*r* to all malignant growths in four to seven weeks, the treatment period depending on the size of field used, with the exceptions of pituitary tumours, which are given 4000*r* in seventeen days, and thyreoid carcinomata, which are given 4800*r* in twenty-eight treatment days. During the last fourteen months 150 patients have been treated, and although it is too early to assess the results accurately, certain advantages of this type of treatment are noted: (i) there is less skin reaction; (ii) each part of the tumour receives the same amount of treatment per day; (iii) it is possible, because of larger fields which may be adequately treated, to include not only the tumour, but the surrounding lymphatics; (iv) rarely is radiation sickness encountered. Of five patients with laryngeal carcinoma, in four the lesions have disappeared completely, with no residual symptoms. Of four patients with nasopharyngeal carcinoma treated, three have shown complete disappearance of primary tumour and lymph nodes. Twelve patients with pituitary adenomata were treated, and ten have shown a good response to radiation. In the treatment of brain tumours, less severe reactions were noted following this method than when 200 kilovolts are used.

MEDICINE.

Siderosis.

A. I. G. MCLAUGHLIN (*The British Journal of Tuberculosis*, July, 1951), in a monograph on siderosis and hæmosiderosis, states that siderosis should no longer be defined as a fibrosis of the lungs. In the siderosis of such persons as hæmatite miners, arc welders and silver finishers, in which iron contained in the inspired air is deposited in the lungs, the aggregations of iron are situated in the peribronchial and periarterial lymph spaces and no fibrosis is found in relation to them. In hæmosiderosis, in which hæmosiderin is deposited, as in mitral stenosis, the phagocytes or siderophores containing the iron are intraalveolar in position and in time develop a fibrous capsule. When a mixed dust is inhaled containing iron and free silica, as by boiler scalers, a mixed-dust fibrosis, siderosilicosis, may result.

The Liver in Heart Failure.

S. SHERLOCK (*British Heart Journal*, July, 1951), from a study of the liver in heart failure based on aspiration biopsy and necropsy material, concludes that cardiac cirrhosis has no specific clinical, blood biochemical or circulatory associations, and that it does not cause intrahepatic portal venous obstruction. The clinical recognition of cardiac cirrhosis is usually impossible. Centrilobular hepatic necrosis is almost invariable in congestive heart failure: if the heart failure increases the necrosis spreads peripherally, while if it responds to treatment the liver lesion heals. The complexity of cardiac jaundice is discussed. Support can be found for hepatocellular, obstructive and hæmolytic theories. In most patients multiple factors are present and the exact cause of the jaundice cannot be determined.

Medical Relief of Cardiospasm.

W. B. CRANDELL (*The Journal of Thoracic Surgery*, September, 1951) reports that he has found the oral administration of 100 millilitres of a 1% solution of procaine beneficial to persons suffering from cardiospasm in the few cases in which it was tried. Relaxation of the cardia could be observed fluoroscopically, and subjective improvement was noticed.

Gallop Rhythm in Hypertension.

B. E. MILES (*British Heart Journal*, July, 1951), who recorded the heart sounds of 100 patients with high blood pressure, found gallop rhythm in 37 of them. There was poor correlation between gallop rhythm and the degree of heart failure and electrocardiographic abnormality. It is suggested that gallop rhythm has little value in prognosis: if two patients had the same history, blood pressure, heart size, degree of cardiac failure and pulse rate, and one of them had gallop rhythm, there is no evidence to show that the latter would have the worse prognosis.

Cheyne-Stokes Breathing.

W. W. PRYOR (*Circulation*, August, 1951), who has made studies of the changes in the arterial blood during the respiratory cycle in patients with cardiac enlargement, prolonged circulation time and Cheyne-Stokes breathing, concludes that in such patients the Cheyne-Stokes type of respiration appears to depend upon delay in the passage of blood from the lungs to the arterial chemoreceptors and the respiratory centre.

Massive Dosage of Penicillin in Endocarditis.

R. L. WHIPPLE, JUNIOR (*American Heart Journal*, September, 1951) reports the cure of a patient suffering from endocarditis due to a strain of *Streptococcus viridans* highly resistant to penicillin by the use of penicillin in an average daily dosage of 86,000,000 units for twenty-eight days. Previous treatment with conventional doses of penicillin and with streptomycin had been unsuccessful. There were no ill effects apart from local reactions to the injections.

Special Articles for the Clinician.

(CONTRIBUTED BY REQUEST.)

V.

NUTRITION IN DISEASE.

FROM the earliest days of medicine until comparatively recent times diet played a major part in the treatment of disease, but nutrients subserving specific functions were not recognized until the nineteenth century because it had never been conceived that there was any difference in the nutritive qualities of the various foods. During this long period, medical practitioners prescribed almost haphazardly all types of diets for the cure of the various diseases. With the advent of the bacteriological era dietetic treatment became relegated mainly to the charlatan and planned nutrition by the physician became, to a large extent, neglected. Today we are only just beginning to realize how very important is the subject of nutrition and we must reorientate our views and inquire whether faulty nutrition is not the main cause of the disorders of many of our patients. This is particularly observable in children living on inadequate diets since they are undersized, dull, lethargic and anæmic and fall easy victims to infections.

Until recent years many lives were lost because the nutritive needs of the body were not recognized. The needs for tissue fluid and electrolytes were the first to receive scientific attention. Where the patient was unable to take these by mouth normal saline was given by hypodermoclysis or intravenously. Later glucose was added and today we are becoming aware of the need to administer proteins and vitamins as well as fluid and electrolytes. In certain disease states there is much evidence to indicate that the intake of proteins should be increased well above normal requirements. This need has been brought to our attention by experimental workers who have shown that a bodily deficiency of proteins may occur much more rapidly than a deficiency of vitamins or minerals.

Proteins have been supplied by transfusions of blood derivatives to tide the patient over a critical period, but even if there were sufficient blood available for the enormous protein requirements of hypoproteinæmic patients it is doubtful whether plasma proteins could be used for energy purposes. Foreign proteins, if introduced into the bloodstream, cause anaphylactic reactions, but recently a new development in tissue nutrition has occurred as a result of the researches into the hydrolysates of protein which are now available for oral and intravenous use.

Interesting speculation arises from the experiments of Whipple and his co-workers, who found that substantial amounts of intravenously given amino-acids were excreted in the urine and that this was less when given subcutaneously and least when given by the mouth. This suggests that the amino-acids undergo some physical or chemical change in the alimentary canal or portal system which prevents their rapid urinary elimination. It illustrates the importance of giving the patient a full nutritive diet at the earliest opportunity. Until this is possible, supplementary nutrition by the intravenous route will save many lives which are today being lost in cases of hepatitis, ulcerative colitis, severe burns, intestinal obstruction, peritonitis, pyloric stenosis and other cases of persistent vomiting in adults and children.

When reference is made to proteins it must be remembered that this does not mean only meat foods. A discussion on the relative merits of animal and vegetable proteins is not germane to this paper, but it is well to remember that animal experiment and human experience have shown that there is no absolute physiological necessity for meats since other animal and vegetable proteins are equally effective—for example, those in cheese, milk, eggs, nuts, legumes *et cetera*.

Sodium and Potassium.

Retention of sodium in the body occurs in congestive cardiac failure, hepatic cirrhosis and renal failure. The importance of dietary sodium restriction in these conditions is discussed later. In Addison's disease sodium depletion may be combated successfully by oral administration of large amounts of sodium chloride. Potassium deficiency may occur in diabetic coma and in infantile diarrhœa and following surgical operations with drainage of intestinal secretions. It has been a happy coincidence that one of the time-honoured invalid foods—orange juice—has a high potassium content.

On the other hand potassium intoxication occurs in other conditions in which orange juice has in the past been administered routinely—an example is acute nephritis and anuria due to other causes. Here the giving of orange juice in the anuric stage will have harmful effects by further increasing potassium levels.

A consideration of nutritional factors in specific disease will be helpful to the practitioner.

Anæmia.

The treatment of secondary anæmia by iron was first introduced in 1746, when Manghinis discovered iron in the blood and demonstrated that it could be increased by a diet rich in iron. It was called secondary or nutritional anæmia. Since that date a great number of iron preparations have been used in soluble and colloid forms and as ferric and ferrous salts. In 1928 it was established that inorganic iron in the presence of copper is most effective for the synthesis of hæmoglobin. It was also established that simple iron salts are readily ionized and are more available to the body than complex forms of iron-like hæmoglobin. The treatment of secondary anæmia can therefore be effected very inexpensively by iron and copper therapy. So satisfactory is this treatment that if there is not an adequate response one must consider the presence of continued blood loss, the lack of some other nutrient or some other type of anæmia. One cannot condemn too drastically the continued advocacy of expensive liver preparations by practitioners and chemists for the treatment of secondary anæmia. In doing so they exhibit ignorance of elementary knowledge in the treatment of the anæmias.

Since iron-deficiency anæmia is almost invariably found in pregnancy it is advisable that every pregnant woman should be given 15 grains of ferrous sulphate daily throughout the period of her pregnancy.

Pernicious anæmia, which was first reported by Addison in 1849, did not respond to iron treatment like secondary anæmia and was not understood until 1926, when Minot and Murphy showed that a normal blood picture could be maintained on a diet of 250 to 500 grammes of liver daily. During recent years there has been remarkable advances in the understanding and treatment of pernicious anæmia. It has been shown that pteroylglutamic acid (folic acid), while restoring the blood picture, does not prevent and may actually accelerate the appearance of the neurological accompaniments of pernicious anæmia. More recently a new member of the water-soluble vitamin complex, vitamin B_{12}, has been discovered. This preparation, like pteroylglutamic acid, was at first thought to satisfy all requirements needed to maintain health in these sufferers. It was indeed believed that liver extract owed its efficacy solely to its vitamin B_{12} activity, but there is now evidence to suggest that there may be no known single anti-pernicious-anæmic factor and a correct balance of active factors is required for satisfactory therapy.

Dentition.

The recent work being carried out by the dental profession on the cause of dental caries has been so illuminating that it calls for review of our dietetic habits. Dental decay is most frequent in those countries where there is a high intake of soft and highly refined carbohydrate foods, especially cane sugar. Oral lodgement and the production of lactic acid by these fermentable carbohydrates will cause decay in most teeth unless the individual has natural immunity. Foods of hard and tough consistency provide the functional stimulus for normal growth and development of the dento-facial ensemble as well as adaptive wear of the teeth.

The enormous amount of dental caries amongst young people in Australia, where the average sugar consumption is by far the highest in the world (131 pounds per head *per annum*) contrasts remarkably with the dentition of some of our so-called primitive races, who live on what we would consider substandard diets of natural foods, and with that of European children during wars with their accompanying malnutrition. In both of these groups refined sugar is almost totally lacking from the dietary. A convincing indictment of sugar is presented by the excellent teeth and general health of the children at Hopewood House, Bowral, where Mr. L. A. Bailey is rearing 86 young Australians. Sugar is not permitted in their dietary and the incidence of dental caries is negligible.

Peptic Ulcer.

In peptic ulcer digestion and appetite are usually not impaired and those sufferers with no significant degree of obstruction are usually adequately nourished, but often they have been eating food which irritates or over-stimulates the stomach.

They must be taught improved eating habits. The great mistake made by many practitioners is over-restriction in the variety of food. Diets of the Sippy type should no longer be used because there is no reason why the patient should not be given a very liberal choice of soft foods even in the acute and post-hæmorrhagic stages; for example, all varieties of milk foods, strained porridge, custards, creamed vegetable soups, boiled potatoes, invalid mince, *et cetera*. Except for those patients who are allergic to it, potato is an ideal food for peptic ulcer patients, for the following reasons: it possesses excellent food qualities; its caloric value is 25 Calories per ounce (old, boiled potatoes) while that of milk is 19 Calories per ounce. It is rich in minerals and in vitamins *A*, *B* and *C*. The vitamin *C* content, which is greater than that of milk, makes potatoes specially valuable in the treatment of ulcer, since it has been established experimentally that vitamin *C* exerts an important healing influence on wounds. Furthermore, it has an alkaline reaction which assists as a neutralizer of acid. In order to retain the vitamin *C* content, potatoes should be boiled in their skins.

Invalid mince is prepared as follows. Rump steak freed from fat and gristle is minced several times and sufficient boiling water is added to liquefy it. It is placed in a saucepan and heated in another saucepan containing hot water just under the boiling point, stirring constantly until the meat turns to a grey colour. The water must not boil.

These foods are highly nutritive and can be used in all patients needing rehabilitation.

In patients with stenosis and vomiting care must be taken to maintain the water and electrolyte balance and to supply sufficient Calories and proteins for energy and nitrogen balance, and it should be remembered that unless the caloric value is adequate a moderate supply of protein will also be inadequate because of its conversion to the energy channels. As in most of these cases today surgical treatment is adopted, it should be realized that the patients' nutritional state has an important bearing on the surgical risk and convalescence. An operation should therefore not be undertaken until the surgeon is satisfied that the state of nutrition is satisfactory. When this cannot be achieved by normal feedings it is necessary to use amino-acids, glucose and vitamins parenterally. Where possible it is best to give high protein mixtures (skim milk, eggs *et cetera*) orally. They are more effective than protein hydrolysates given intravenously. The maintenance of normal nitrogen balance in this way will aid greatly in lowering surgical morbidity and mortality.

It has been stated by some experimental workers that feeding ulcer patients with protein hydrolysate together with carbohydrate foods is an advance on the orthodox ulcer feeding regimens, but this has not been confirmed. On the contrary, there is evidence to suggest that the expected buffering action of the amino-acid is offset by the stimulated production of hydrochloric acid. Furthermore, the high osmotic pressure of casein hydrolysates produces diarrhœa with such frequency that their use has often to be abandoned.

As soon as the patient is free from pain he should be encouraged to eat freely of a bland, low-residue, non-stimulating diet. The important rules to be observed are: (*a*) regular hours of feeding; (*b*) three main meals daily with a glass of milk between meals and at bedtime; (*c*) eating slowly, chewing all food to the consistency of cream before swallowing. The rule most commonly broken is that of taking some milk *et cetera* at bedtime.

Ulcerative Colitis.

In ulcerative colitis nutritional deficiencies are a main obstacle to recovery. The serum levels of all vitamins, especially vitamin *C* and the vitamin *B* complex, are sub-normal. Hypochromic anæmia, hypoproteinæmia, hypoprothrombinæmia are all commonly present in this disease. It is believed that the tissue destruction and the hæmorrhage are more important causes of these adverse balances than is the poor absorption due to intestinal hurry.

The maintenance of adequate nutrition is the chief aim in the treatment of this condition. The diet should be as highly nutritious as possible but mechanically and chemically non-irritating to the colon, for example, such foods as invalid mince, boiled potato, milk food combinations, eggs, strained porridge, rice, fruit juices, with extra proteins and vitamins, copper and iron. Yeast provides a satisfactory supply of vitamin *B*.

Idiopathic Steatorrhœa.

In idiopathic steatorrhœa careful dieting is sometimes a life-saving measure. The fat intake should be reduced to a minimum and protein should be given liberally. Carbohydrates are usually well tolerated, but there is often individual intolerance to certain types of carbohydrate foods —these must be judged by trial and error. Most vegetables and fruits are well tolerated. Bananas are usually very satisfactory. As there is usually calcium deficiency this must be supplied by skim milk and extra calcium. If the blood prothrombin level is subnormal a vitamin *K* preparation should be given until normality is restored. Vitamins *A*, *D* and *B* should also be given. With strict attention to these details children with cœliac disease usually make steady progress and ultimately become healthy people, though usually they remain intolerant to fats.

Liver Disease.

For some years it has been thought that a diet with a high carbohydrate content protects the liver from damage. This was based on the belief that as liver glycogen is stored liver cell lipoids will automatically be displaced. More recent work shows that protein is more important than carbohydrate in this respect. The value of carbohydrates is that they prevent the protein from being used purely for energy purposes. Work on experimental animals suggests that diets with high protein (100 to 150 grammes daily) and carbohydrate contents should be used in the prevention and treatment of liver damage. Some physicians recommend supplementing these diets with amino-acids such as methionine and choline.

There is experimental evidence to show that the ascites in portal cirrhosis is probably due to a disturbance in the adrenal mechanisms, as a result of which sodium is retained in the body by increased absorption in the renal tubules. Therefore patients should not only receive diets with a high protein content to relieve the hypoproteinæmia but also sodium should be rigorously restricted.

The liver also plays an important role in the metabolism and storage of vitamins. These should be added to the diet, especially the vitamin *B* complex, vitamin *K* may be useful to support the prothrombin level.

It is doubtful whether there was any merit in the age-old insistence on the restriction of fat. This was probably founded on the belief that it was injurious because excess of fat will sometimes provoke an attack of biliary colic. There appears to be no scientific reason, unless there is obesity, for not allowing a normal amount of fat if the patient desires it.

The improved nutritional standards of modern times appear to have dispelled the old belief that cirrhosis of the liver is caused by ethyl alcohol, for although enormous amounts of alcohol are still being consumed, the classical "hob-nail" liver (portal cirrhosis) is becoming a rarity. It is believed now to be a nutritive disease and occurs only when alcoholics are not adequately nourished, the alcohol acting perhaps synergistically with other metabolic factors.

A nutritional disorder widespread in Africa which has been given the names of kwashiorkor, infantile pellagra and malignant malnutrition, has attracted considerable interest in recent times, especially since the discovery of specific factors in the prevention of liver diseases caused by dietetic deficiencies. Although there is considerable variety in the clinical and pathological findings in this condition, it has focused our attention on the important part played by malnutrition, especially protein deficiency (probably combined with infections) in causing widespread and often fatal pancreatic and liver destruction.

This discovery has opened up great possibilities for research in the ætiology and treatment of all types of liver and pancreatic disease and doubtless much new knowledge will be gained.

Nephritis.

Since the discovery was made that the end products of protein metabolism are excreted by the kidneys, it has become the practice to withhold all protein from the diets of nephritic patients, but there is no scientific evidence to indicate that a moderate amount of protein is harmful; on the other hand it is probable that when there is much loss of protein in the urine (in the nephrotic syndrome this may be more than 30 grammes daily), restriction of protein in the diet does incalculable harm to tissue nutrition. There is therefore no reason why a patient with nephritis should not have a well-balanced normal diet; but experiments with animals show that diets rich in protein can be as harmful as diets with a low protein content. The ideal is sufficient protein to maintain the nitrogen balance; if oliguria is present, as in acute nephritis, protein should be restricted, but as soon as the acute phase has passed an average of 30 to 40

grammes of protein daily for recumbent adults and 60 to 80 grammes for ambulatory adults should be given, and where there is much protein loss in the urine the intake should be increased by an extra amount to replace the loss.

In the presence of tissue œdema, which in most cases is due to the inability of the kidneys to excrete sodium, there must be strict withholding of all sodium salts, either in the form of table salt, salt in the cooking, sodium alkalis or foods with high sodium content.

Renal Calculi.

There is considerable evidence to indicate that renal calculi are often the result of a deficiency state. Before the advent of good dietary regimens amongst our own people it was a very frequent finding, and today amongst the poorly nourished peoples of the East it is still a common complaint. From this example and from experiments on animals one is justified in considering dietetic treatment to be of value in the prevention and treatment of these states. Except in a few instances of recently formed calcium stones, it is doubtful whether, once formed, they can be reduced, but further calcium formation can be controlled in many cases.

From a knowledge of the diets which produce the various forms of calculi in experimental animals we can, with reason, restrict these productive factors in the diet. For example, since urates and uric acid stones can be produced in a strongly acid urine with high purin excretion, the urine should be kept neutral or alkaline and foods rich in purin should be restricted. With calcium stones the problem is more difficult because there is usually present some disorder of calcium metabolism, but since calcium oxalates are commonly found, oxalates in the diet should be reduced to a minimum and a high water intake should be instituted while at the same time the urine should be kept neutral. Calcium phosphate stones are very prone to occur in recumbent patients and in patients with peptic ulcer on alkaline therapy. They also should have copious fluid intake and the urine should be kept as nearly neutral as possible.

Arteriosclerosis and Hyperpiesia.

In arteriosclerosis and hyperpiesia there has been a long-standing belief in the alleged damaging effects of proteins, but even in the presence of renal damage there is no justification for withholding a normal protein intake. The success of Kempner in reducing blood pressure by a rice and fruit juice diet has focused attention on this treatment. It was found that although it is effective on the blood pressure, it is inadequate for tissue nutrition. Further work has revealed that there is no specific blood pressure reducing factor in rice, but that the low sodium content of this diet is the reason for the fall in blood pressure. As a result a well-balanced diet of mixed foods low in sodium content and the avoidance of all table salt and other sodium salts is now advocated. It gives excellent results in many cases. With the possible exception of methonium compounds it is the greatest advance in the treatment of hypertension since the introduction of sympathectomy.

Cardiac Failure.

In cardiac failure also, the institution of a regimen with a low sodium content lessens tissue œdema, helps to restore compensation and if instituted before actual failure may prevent its onset for a considerable time.

Obesity.

Obesity is not always as simple a problem as many clinicians believe when they state it can be cured by increasing the energy output and decreasing the intake of fattening foods, nevertheless, in the great majority of cases, great improvement can be effected by following these rules. The adverse effects of obesity are exhibited by the shorter expectation of life of these people; it also is commonly associated with increased vascular hypertension, early heart failure, diabetic and orthopædic disorders. Obesity coexisting with any of these disease conditions improves the prognosis as compared with that of the non-obese patient with a similar condition, because the obesity is a removable loading.

A dietetic regimen reducing the caloric intake by limiting the fat and carbohydrate in the diet will increase the well-being of these patients as well as save them from premature cardio-vascular breakdowns and will sometimes give spectacular results.

Atherosclerosis.

In atherosclerosis the derogatory effects of obesity have long been known, reduction of animal fat in the diet is particularly desirable because of its high cholesterol content.

Diabetes.

In diabetes a planned well-balanced diet is essential for survival and it is possible that if such a regimen is faithfully followed, the diabetic, in the words of Joslin, "is better off for his diabetes".

Food Allergy.

Individual reactions to various allergens vary greatly. "What is one man's meat is another man's poison." Elimination diets should be carefully planned when it is realized that certain foods are causing dyspepsia or other allergic manifestations—the commonest offenders are milk, chocolate, citrus fruits, shellfish, spices, wine. When the offending allergens are known they should be eliminated as much as possible from the diet. Foods containing such allergens can be rendered tolerable by various measures; for example, milk by boiling, cooking as milk foods or by adding sodium citrate to it, citrus fruit may be tolerated if followed by bicarbonate of soda or other alkali, wine by serving alkaline Vichy water after it as is the practice in some French restaurants. Other offending foods if chewed slowly and well mixed with saliva may become innocuous.

The Nervous System.

By the findings in prisoners of war in the hands of both the Japanese and the Germans new interest has been aroused on the effects of malnutrition on the nervous system. Besides the types of beriberi so commonly observed, especially in the eastern theatre of war, there may be a disturbance of each and every sensory function of the body, sometimes with, but usually without, any motor effects.

Thyreotoxicosis.

In thyreotoxicosis many clinicians do not realize sufficiently the enormous caloric need imposed by the increased metabolic rate. While the patient is losing weight the intake of high caloric foods must be greatly increased until the lost weight is regained; this will sometimes necessitate an intake of 6000 Calories daily. There is also need to increase the intake of vitamins, especially thiamine. There is some evidence to suggest that liver extract and vitamin B_{12} are also helpful in these patients.

Conclusion.

The above very brief review of nutritional requirements in many diseases indicates the need for the much closer study and consideration of this subject, which in the past has lagged behind the study of bacteriology and pathology.

Not only can the proper application of present knowledge prevent much debility and disease, but neglect of it will cause a not-inconsiderable mortality.

The great need today is to teach people correct standards of diet for maintaining good health. We must remember also that it was only in 1912 that Funk first named vitamins and there are still innumerable important factors in food which are unknown to us. For this reason we must stress the use of natural food rather than chemicals and vitamins from a bottle. These should be reserved for cases of known specific deficiencies.

It is timely that all physicians should have special training in the science of nutrition, which is more important than any other single factor operating on human life. The nutrition of all patients will then be given prime consideration and morbidity and mortality from disease will be greatly reduced.

L. J. JARVIS NYE,
Brisbane.

Congress Notes.

AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

THE Executive Committee of the Eighth Session of the Australasian Medical Congress (British Medical Association) to be held at Melbourne from August 22 to 29, 1952, has sent the following information for publication.

Scientific Papers.

Members and intending members of Congress who desire to present papers to the meetings of sections are advised that the Executive Committee has made the following

decisions: (*a*) Offers of papers will be received by the honorary secretaries of sections (see appended list) until February 29, 1952, and authors must indicate at least the title of the proposed paper with a précis of its subject if a completed paper is not submitted. (*b*) Intending speakers will be notified not later than April 30, 1952, whether their paper has been accepted or rejected. (*c*) Four copies, in final form, of papers accepted (in addition to the author's copy), typed in double spacing on one side of the paper only, complete with illustrations, together with a note of visual aid requirements, must be in the hands of the appropriate secretary of section by June 30, 1952. It is essential that four copies of each paper be supplied, one for the chairman of the meeting at which it is to be presented, one for the Congress records, one for the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, and one for the lay Press liaison officer.

Under the rules of Congress, no paper can be taken as read, and unless it is read it does not form part of the proceedings of Congress.

Honorary secretaries of sections are as follows: Anæsthesia, Dr. V. Brand; Dermatology, Dr. J. Conquest; History of Medicine, Dr. K. Bowden; Medicine, Dr. W. E. King; Naval, Military and Air Force Medicine and Surgery, Dr. J. Glyn White; Neurology and Psychiatry, Dr. J. Game; Obstetrics and Gynæcology, Dr. W. J. Rawlings; Ophthalmology, Dr. J. McB. White; Orthopædics and Physical Medicine, Dr. J. J. Woodward; Oto-Rhino-Laryngology, Dr. C. Pyman; Pathology, Bacteriology, Biochemistry, Experimental Medicine and Forensic Medicine, Dr. G. Harkness; Pædiatrics, Dr. Howard Williams; Public Health, Industrial Medicine, Tropical Medicine and Aviation Medicine, Dr. R. J. Farnbach; Radiology and Radiotherapy, Dr. P. H. Davis; Surgery, Dr. S. Reid.

All correspondence to honorary secretaries of sections should be addressed to 426 Albert Street, East Melbourne, C.2, Victoria.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the Victorian Branch of the British Medical Association and of the Medical Society of Victoria was held at the Medical Society Hall, Albert Street, East Melbourne, on December 5, 1951, DR. R. F. WATSON, the President, in the chair.

ELECTION OF OFFICE-BEARERS AND MEMBERS OF COUNCIL.

The Medical Secretary announced that the Council had elected the following office-bearers:

President: Dr. Charles Byrne.

Vice-Presidents: Dr. L. H. Ball, Dr. G. R. Weigall.

Chairman of Council: Dr. H. C. Colville.

Honorary Treasurer: Dr. D. J. Thomas.

Honorary Secretary: Dr. H. G. Hiller.

Honorary Librarian: Dr. H. G. Furnell.

The Medical Secretary announced that the following had been elected members of the Council by the general body of members: Dr. A. E. Brown, Dr. Charles Byrne, Dr. H. G. Furnell, Dr. K. H. Hallam, Sir Victor Hurley, Dr. H. M. James, Dr. L. W. Johnston, Dr. M. O. Kent Hughes, Dr. J. H. Lindell, Professor P. MacCallum, Dr. A. H. Melville, Dr. F. Kingsley Norris, Dr. B. K. Rank, Dr. Robert Southby.

The Medical Secretary announced that the following had been elected members of the Council by the subdivisions: Dr. W. R. Angus, Dr. L. H. Ball, Dr. M. H. Box, Dr. D. D. Browne, Dr. D. A. Carter, Dr. W. J. Flanagan, Dr. P. Goodman, Dr. A. B. Hewitt, Dr. J. Gavin Johnson, Dr. H. G. Judkins, Dr. A. B. McCutcheon, Dr. D. G. MacKellar, Dr. L. A. Neal, Dr. Donald Pryde, Dr. C. A. M. Renou, Dr. W. A. Sloss, Dr. T. G. Swinburne.

The Medical Secretary announced that the ex-officio members of the Council were: Dr. H. C. Colville, Dr. F. L. Davies, Sir John Newman Morris, Dr. D. Roseby, Dr. D. J. Thomas (trustees of the Medical Society of Victoria), Dr. J. P. Major (director of the Australasian Medical Publishing Company, Limited).

The representative of the Victorian Medical Women's Society was Dr. Elizabeth McComas.

The Medical Secretary announced that the following had been coopted as members of the Council: Dr. R. F. Watson, Dr. H. G. Hiller, Dr. J. G. Hurley.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council which had been circulated among members was received on the motion of Professor P. MacCallum seconded by Dr. A. B. McCutcheon and adopted on the motion of Professor P. McCallum seconded by Dr. R. Southby. The report is as follows:

Election.

At the annual meeting held last December the following members of the Council and of the Committee were elected: Dr. A. Brown, Dr. C. Byrne, Dr. H. G. Furnell, Dr. K. H. Hallam, Sir Victor Hurley, Dr. H. M. James, Dr. L. W. Johnston, Dr. M. O. Kent-Hughes, Dr. J. H. Lindell, Professor P. MacCallum, Dr. A. H. Melville, Major-General F. Kingsley Norris, Dr. B. K. Rank, Dr. R. Southby.

The following were elected to represent the subdivisions: Dr. W. R. Angus, Dr. L. H. Ball, Dr. M. H. Box, Dr. D. D. Browne, Dr. D. A. Carter, Dr. B. D. Fethers, Dr. W. J. Flanagan, Dr. P. Goodman, Dr. A. B. Hewitt, Dr. J. G. Johnson, Dr. A. McCutcheon, Dr. D. G. MacKellar, Dr. L. A. Neal, Dr. C. A. M. Renou, Dr. W. A. Sloss, Dr. T. G. Swinburne, Dr. R. F. Watson, Dr. G. R. Weigall.

Under Rule 9 of the Branch, Council elected Dr. Elizabeth McComas, who was nominated by the Victorian Medical Women's Society.

The following are ex-officio members: the trustees of the Medical Society of Victoria, Dr. H. C. Colville, Dr. F. L. Davies, Sir John Newman Morris, Dr. D. Roseby and Dr. D. J. Thomas, and the director for Victoria of the Australasian Medical Publishing Company, Dr. J. P. Major.

Cooption: Dr. H. G. Hiller and Dr. J. G. Hurley were coopted members of the Council.

The Council elected the following office-bearers: *President*, Dr. R. F. Watson; *Vice-Presidents*, Dr. Charles Byrne and Dr. L. H. Ball; *Chairman of Council*, Dr. H. C. Colville; *Honorary Treasurer*, Dr. Douglas Thomas; *Honorary Librarian*, Dr. H. G. Furnell; *Honorary Secretary*, Dr. H. G. Hiller.

The executive consisted of the president, the immediate past president, Dr. Robert Southby, and other office-bearers.

Attendances at Council Meetings.

Twelve meetings of the Branch Council were held, the following showing the attendances:

Dr. H. G. Hiller	12	Dr. A. H. Melville	8
Dr. R. Southby	12	Dr. B. D. Fethers	7
Dr. G. R. Weigall	12	Dr. H. M. James	7
Dr. L. H. Ball	11	Major-General F. K. Norris	7
Dr. H. C. Colville	11	Dr. D. Roseby	7
Dr. K. H. Hallam	11	Dr. A. B. Hewitt	6
Dr. M. O. Kent-Hughes	11	Dr. J. P. Major	6
Dr. J. G. Johnson	11	Dr. L. A. Neal	6
Dr. G. Swinburne	11	Sir John Newman Morris	6
Dr. R. F. Watson	11	Dr. H. G. Furnell	5
Sir Victor Hurley	10	Dr. P. Goodman[1]	5
Dr. E. McComas	10	Dr. J. H. Lindell[1]	5
Dr. C. A. M. Renou	10	Dr. B. K. Rank[2]	5
Dr. D. A. Carter	9	Dr. W. R. Angus[1]	4
Dr. F. L. Davies	9	Dr. A. E. Brown	3
Dr. L. W. Johnston	9	Dr. D. D. Browne[1]	3
Professor P. MacCallum	9	Dr. W. J. Flanagan[1]	3
Dr. D. J. Thomas	9	Dr. J. G. Hurley[3]	2
Dr. M. H. Box[1]	8	Dr. D. G. MacKellar	1
Dr. C. Byrne	8	Dr. W. A. Sloss	1
Dr. A. B. McCutcheon	8		

The highest attendance at any one meeting was 32, and the average attendance was 26.

Appointment of Subcommittees.

The following subcommittees were appointed by Council at the beginning of the year (the first named acting as convener of the subcommittee):

Ethics.—Dr. Major, Dr. Davies, Sir John Newman Morris, Dr. McCutcheon and the executive.

Finance, House and Library.—Dr. Thomas, Dr. Furnell, Major-General Norris and Dr. Weigall.

[1] Represented by substitute at one meeting.
[2] Granted leave of absence during the year.
[3] Coopted during the year.

Legislative.—Dr. Davies, Dr. Colville, Dr. Rank, Dr. Renou and Dr. Watson.

Organization.—Dr. Swinburne, Dr. Ball, Dr. Box, Dr. Brown, Dr. Byrne, Dr. Colville, Dr. Fethers, Dr. Furnell, Sir Victor Hurley, Dr. J. G. Johnson, Dr. L. W. Johnston, Dr. Kent-Hughes, Dr. McComas, Dr. McCutcheon, Dr. Neal, Dr. Rank, Dr. Renou, Dr. Roseby, Dr. Southby, Dr. Watson, Dr. Weigall, and representatives of the country subdivisions.

Science.—Professor MacCallum, Dr. Hallam, Dr. L. W. Johnston, Dr. Lindell, Major-General Norris and Dr. Watson.

Hospital.—Dr. Southby, Dr. Ball, Dr. Colville, Dr. Fethers, Dr. Hallam, Sir Victor Hurley, Dr. James, Dr. Lindell, Dr. Melville, Dr. Neal, Dr. Watson and Dr. Weigall.

Correspondence.—Dr. Colville and Dr. Hiller.

Workers' Compensation.—Dr. Ball, Dr. Byrne, Dr. Colville, Dr. Kent-Hughes, Dr. Rank, Dr. Renou and Dr. Roseby.

Publicity.—Dr. Ball, Dr. Byrne, Dr. Swinburne, Dr. Thomas and the Medical Secretary.

Building Committee.—The President, Honorary Treasurer, Honorary Secretary and Dr. Coates.

Social Committee.—Dr. Roseby, Dr. Swinburne and Dr. Weigall.

Appointments and Nominations.

Medico-Pharmaceutical Liaison Committee.—Dr. Roseby, Dr. Byron Stanton, Dr. Thomas, the President (ex officio), and the Medical Secretary.

Trustees of the Medical Society of Victoria.—Dr. H. C. Colville, Dr. F. L. Davies, Sir John Newman Morris, Dr. D. Roseby and Dr. D. J. Thomas.

Central Council, British Medical Association.—Dr. M. L. Formby.

Federal Council.—Dr. Charles Byrne, Dr. H. C. Colville and Sir Victor Hurley. (Following the retirement of Sir Victor Hurley during the year, Dr. Robert Southby was appointed to succeed him.)

British Medical Agency.—Dr. C. H. Dickson, Major-General F. Kingsley Norris, Dr. G. Robinson and Dr. D. J. Thomas.

British Medical Insurance Company of Victoria, Limited.—Directors: Sir John Newman Morris (chairman), Dr. C. H. Dickson, Dr. H. G. Furnell, Sir Victor Hurley, Dr. W. W. S. Johnston and Major-General F. Kingsley Norris.

Victorian Correspondent, "The Medical Journal of Australia".—Dr. H. G. Hiller.

Victorian Correspondent, "British Medical Journal".—Dr. H. G. Hiller.

Victorian Bush Nursing Association.—Dr. Elizabeth McComas.

Hospital Benefits Association.—Dr. C. H. Dickson, Major-General F. Kingsley Norris, Dr. D. Roseby and Dr. G. R. Weigall.

Electoral Board, Medical Staffing of Base Hospitals.—Dr. J. P. Major and Major-General F. Kingsley Norris.

Medical Eye Service of Victoria.—Dr. R. Stott.

Free Kindergarten Union.—Dr. H. Boyd Graham.

Victorian Baby Health Centres' Association.—Dr. M. L. Powell.

Lord Mayor's Fund.—Sir John Newman Morris.

Victorian Council for Mental Hygiene.—Dr. John Dale and Dr. G. R. Weigall.

Melbourne Permanent Post-Graduate Committee.—Professor P. McCallum, Dr. J. P. Major and Dr. B. Milne Sutherland.

Medical Officers' Relief Fund (Federal).—Advisory Committee: Dr. F. L. Davies, Dr. D. J. Thomas and Dr. W. G. D. Upjohn.

Federal Medical War Relief Fund.—Advisory Committee: Dr. F. L. Davies, Dr. D. J. Thomas and Dr. W. G. D. Upjohn.

Services Recognition Fund (Formerly Legacy Fund).—Dr. A. E. Coates, Major-General F. Kingsley Norris and Dr. D. J. Thomas.

Australian Aerial Medical Service.—Sir John Newman Morris.

Nurses' Board.—Dr. W. M. Lemmon and Dr. A. R. Kelly.

Dietetic Association of Victoria.—Dr. T. A. F. Heale.

Committee of Lord Mayor's Country Children's Holiday Camp.—Dr. L. T. Tyrer.

Society for Crippled Children.—Dr. H. Boyd Graham.

State Medical Planning Committee.—Dr. H. G. Furnell.

Consultative Council on Influenza.—Dr. K. D. Fairley.

Anti-Cancer Council of Victoria.—Sir Victor Hurley, Dr. J. E. Clarke and Dr. H. Searby.

Opticians' Registration Board.—Dr. T. a'B. Travers and Dr. F. G. Fenton.

National Safety Council of Australia.—Dr. John Gowland.

Masseurs' Registration Board.—Dr. C. Hembrow and Dr. Leigh Wedlick.

Joint Insurance Adjudication Committee.—Dr. L. H. Ball, Dr. D. Roseby and Dr. W. G. D. Upjohn.

National Committee of British Commonwealth Collection of Microorganisms.—Professor S. D. Rubbo.

Victorian Council of Speech Therapy.—Dr. R. Southby.

Annual Representative Meeting, British Medical Association, London, 1951.—Representative, Dr. Arthur Brown; deputy representative, Dr. Douglas Galbraith.

Medical Advisory Committee, Hospitals and Charities Commission.—Dr. A. B. McCutcheon and Dr. R. Southby.

Rotary Club (Citizens' Committee).—Dr. R. Southby.

International Congress on Industrial Medicine, Lisbon, 1951.—Branch representative, Dr. S. Crawcour.

Australian and New Zealand Association for the Advancement of Science: Twenty-Eighth Meeting, Brisbane, 1951.—Professor P. MacCallum.

Standards' Association of Australia (Victorian Division): Committee on Hospital Furnishings and Equipment.—Dr. J. H. Lindell.

Victorian Documentary Film Council, Advisory Committee on Scientific Films.—Dr. R. S. Hooper and Dr. Morris Davis.

Consultative Council on Quarantinable Diseases.—Dr. P. Gilbert.

Conjoint Committee with the Friendly Societies Association of Victoria.—Dr. Charles Byrne, Dr. J. G. Johnson and Dr. C. H. Dickson.

Branch Convocation.

The following were elected for the year 1951: *Melbourne Central*: Dr. T. Ackland, Dr. C. J. O. Brown, Dr. J. E. Clarke, Dr. E. E. Dunlop, Dr. C. H. Fitts, Dr. H. Boyd Graham, Dr. K. Mackay, Dr. J. O'Sullivan, Dr. G. Penington, Dr. S. Reid, Dr. J. E. Sewell, Dr. G. Springthorpe, Dr. M. Tallent. *Western Suburban*: Dr. L. Gurry, Dr. L. Joel, Dr. E. F. J. Smith. *South East Suburban*: Dr. V. C. Brown, Dr. C. C. Dyte, Dr. G. Foreman, Dr. E. Kirsner, Dr. G. L. Lillies, Dr. L. Nicholson, Dr. J. H. Paterson, Dr. R. M. Shaw. *Eastern Suburban*: Dr. W. L. Carrington, Dr. R. E. Donald, Dr. A. S. Ferguson, Dr. W. E. Hewitt, Dr. H. J. Hosking, Dr. L. Inglis, Dr. H. Judkins, Dr. E. E. MacKay, Dr. G. Watters. *North East Suburban*: Dr. M. Ashkenasy, Dr. J. Cotterill, Dr. W. Heslop. *Northern Suburban*: Dr. J. E. Dunn, Dr. S. L. Fredman, Dr. D. A. Lear, Dr. J. O'Keefe, Dr. K. Ratten, Dr. A. Wilson. *Southern Suburban*: Dr. A. L. Giblin, Dr. L. Middleton, Dr. T. O. Sayle, Dr. H. F. Tucker, Dr. C. Turner, Dr. D. Zacharin. *South Central Suburban*: Dr. D. H. Bodycomb, Dr. D. M. Dunn, Dr. R. Park, Dr. M. M. Perl, Dr. J. Smibert, Dr. A. Thomson. *Ballarat*: Dr. G. Pern, Dr. M. Robinson. *Bendigo*: Dr. M. Jacobs, Dr. A. Newson, Dr. W. Rosenthal. *Geelong*: Dr. R. L. Fulton, Dr. D. A. Kidd. *Goulburn*: Dr. R. O. Mills. *Gippsland*: Dr. J. M. Andrew, Dr. D. I. Fitzpatrick, Dr. H. V. Peake. *North East Country*: Dr. W. Gove, Dr. H. Marks. *North West Country*: Dr. J. C. Pickering, Dr. E. J. C. Claridge. *South West Country*: Dr. C. B. Berryman, Dr. G. D. Watson.

Membership Roll.

The number of members on the roll at October 30, 1951, was 2251, which was 81 more than last year. Two hundred and thirty members were added (115 by election, 39 were reinstated by payment of arrears, and 76 were transferred from other States) and 149 names were removed (16 by death, 54 by transfer to other States, 12 by resignation, and 67 allowed their subscriptions to fall into arrears).

Honorary medical members number 27.

Deceased.

The death of the following members and former members is recorded with regret: Dr. A. F. Agnew, Dr. R. T. Allan, Dr. W. J. Allen, Dr. J. H. Anderson, Dr. H. S. Bourke, Dr. W. J. Cameron, Dr. W. W. Chaplin, Dr. J. H. Downing, Dr. E. Field, Dr. Janet L. Grieg, Dr. K. B. Hope, Dr. R. W. Hornabrook, Dr. S. E. Humphreys, Dr. J. L. King, Dr. J. A. Larwill, Dr. J. A. Lavery, Dr. J. C. Lewis, Dr. A. N.

McArthur, Dr. T. R. Matson, Dr. H. A. Maunder, Dr. G. E. Murphy, Dr. T. P. Noonan, Dr. Ethel Parnell, Dr. A. J. W. Philpott, Dr. J. Sandison Yule, Dr. Helen Sexton, Dr. H. H. Spencer, Dr. W. A. Spring, Dr. Effie Stillwell, Dr. B. Milne Sutherland, Dr. G. V. Taylor, Dr. Henry Watson, Dr. R. G. Weaver, Dr. F. E. Webb.

Dr. J. H. Anderson: Following the death in November, 1950, of Dr. J. H. Anderson, of Ruthin Castle, North Wales, who had for some years represented the Southern Group of Branches of the Association on the Central Council, the Branch Council passed the following resolution:

> The Council of the Victorian Branch of the British Medical Association records with regret the death of John Hubback Anderson, C.M.G., C.B.E., M.D., F.R.A.C.P., sometime Senior Demonstrator in Anatomy in the University of Melbourne and later physician at Ruthin Castle Clinic. Dr. Anderson's high ideals of duty were exemplified by his service in Gallipoli and France in the war of 1914-1918, in the war of 1939-1945, by his service as Assistant Director-General of Medical Services of the Australian Army Staff in London, by his chairmanship of the Denbigh and Flint Division of the British Medical Association from 1938 to 1941, and by his membership of the Council of the British Medical Association from 1946 to 1950, as representative of the Southern Group of Branches in Australia. Council extends its sympathy to the late Dr. Anderson's son and daughter, and to his brother, Dr. Archie Anderson.

Mr. Edgar H. Ward: Mr. Ward, who had been associated with the Branch for twenty years, died on December 9, 1950, and, following his death, the Branch Council resolved:

> The Council of the Victorian Branch of the British Medical Association records with regret the death of Mr. Edgar H. Ward, who for twenty years, first as secretary of the Standing Insurance Committee and, from 1934, as financial secretary of the Branch, rendered loyal and devoted service to the Association. Council extends its sympathy to Mrs. Ward and her son.

Congratulations.

During the year the Council had pleasure in congratulating the following: Dr. A. Macrae, on his appointment as Secretary of the British Medical Association, London, following the retirement of Dr. Charles Hill on his election to Parliament; Sir Macfarlane Burnet, who received the honour of knighthood from His Majesty the King; Dr. Clifford Craig, C.M.G., Dr. Lucy Bryce, C.B.E., Dr. John James, O.B.E., and Dr. Alan Vickers, O.B.E., as the recipients of honours conferred upon them by His Majesty the King; Miss A. M. Sage, C.B.E., Matron-in-Chief, Royal Australian Army Nursing Service, and Miss A. J. Wheatley, O.B.E., Matron-in-Chief, R.A.A.F. Nursing Service, as the recipients of honours conferred upon them by His Majesty the King; Sir John Newman Morris, on his appointment as Deputy Chancellor of the University of Melbourne; Professor Lance Townsend on his appointment as Professor of Obstetrics and Gynæcology in the University of Melbourne; Sir Philip Messent, Director of Surgical Studies in the University of Adelaide, on being created a Knight Bachelor; Dr. Mervyn Archdall, Editor of THE MEDICAL JOURNAL OF AUSTRALIA, on the Commonwealth Jubilee number of the journal.

Church Services.

The second annual church services for the medical profession were held on Sunday, February 11, 1951. Members of the profession assembled in the precincts of St. Paul's Cathedral and St. Patrick's Cathedral and entered in procession. At St. Paul's Cathedral the preacher was the Right Reverend J. D. McKie, the Bishop of Geelong, and at St. Patrick's Cathedral the celebrant and preacher was the Reverend Father George Hannan. Both services were well attended.

The Stawell Memorial Prize for 1950.

The Stawell Memorial Prize for 1950 was awarded to Dr. L. J. Parr, of Sydney, for his essay on rheumatoid arthritis. The prize was presented to Dr. Parr in Melbourne at the June monthly meeting of the Victorian Branch.

Entertainment.

In February the Branch Council entertained at lunch members of the Federal Council who were in Melbourne for a meeting of the Federal Council.

In December, 1950, new graduates who had passed their supplementary examinations were entertained at afternoon tea; and in October, 1951, the 1951 graduates were entertained.

Golf.

The twelfth annual golf tournament of the Branch was held on November 23, 1950, at the Royal Melbourne Golf Club, on its East Course at Cheltenham. The championship cup (the Weigall Cup) was won by Dr. E. A. Eddy and the handicap cup (the Roseby Cup) was won by Dr. H. H. Jackson. The spoon competition was won by Dr. H. P. Kelly and Dr. R. S. Smibert.

Meetings of the Branch.

The following meetings of the Branch were held in Melbourne:

March.—Combined meeting with the Pharmaceutical Society of Victoria and the Pharmaceutical Service Guild of Victoria.

April.—The seventh Embley Memorial Lecture, "The Teaching of Anæsthesia, Especially in Relation to Safety and Resuscitation", by Dr. Norman James, Director of Anæsthesia at the Royal Melbourne Hospital.

May.—"Surgery and Surgical Teaching Overseas", by Dr. A. E. Coates.

June.—Combined meeting with the Australian Dental Association in the lecture theatre of the Royal Melbourne Hospital. The subject discussed was "Oral Infection in Relation to Systemic Disease", Dr. Morris Davis presenting the medical and Professor Arthur Amies the dental viewpoint.

October.—The eighteenth Sir Richard Stawell Oration, "Time, Science and the Individual", by Dr. Douglas Thomas.

The following meetings were held in the country:

April.—Bendigo. As a contribution by the two professions to the centenary of Bendigo, a combined meeting with the Australian Dental Association was held in Bendigo in April, the third Fetherston Memorial Lecture, "Populating the Antipodes, or Migration, Motherhood, and Midwifery in the Making of Victoria", being delivered by Dr. Robert Fowler on Friday evening, April 27; and Dr. B. K. Rank lecturing on "Skin Lesions of the Face" on Saturday evening, April 28.

June.—A Branch meeting was held at the Greenvale Sanatorium for the first time. The sanatorium was inspected and cases presented. The Council and members of the Branch attending the meeting were very appreciative of the excellent arrangements made by the medical superintendent and the staff.

November.—Geelong. In the afternoon members of the Geelong Subdivision presented cases at the Kitchener Memorial Hospital and two lecturettes were delivered, Dr. J. T. Robinson speaking on "Principles of Treatment of Squint" and Dr. C. W. Gale on "Post-Operative Ileus". In the evening Dr. Bryan Keon-Cohen spoke on "Pain in the Back: Disk Lesions".

The following clinical meetings and demonstrations were held:

May.—Alfred Hospital.

June.—Royal Melbourne Hospital.

July.—Physiology Department, University of Melbourne.

August.—Department of Pathology, University of Melbourne.

September.—Prince Henry's Hospital.

November.—Children's Hospital.

The Branch Council expresses its appreciation and thanks to the committees and honorary secretaries of country subdivisions for the excellent arrangements made for the conduct of meetings, to the wives of members of the subdivisions for the kindnesses and hospitality to visiting members and their wives, and to the committees of base hospitals for the provision of facilities.

Council also expresses its appreciation and thanks to the staffs of the Alfred Hospital, Royal Melbourne Hospital, Prince Henry's Hospital and the Children's Hospital, and to the Physiology Department and Pathology Department of the University of Melbourne for arranging very successful clinical meetings and demonstrations during the year.

Special Meeting of the Branch.

On November 17, 1950, a special meeting of the Branch was called to consider the future of friendly society medical practice.

Armistice Day.

On the morning of Friday, November 9, members assembled in the foyer of the Medical Society Hall and the President laid a wreath on the War Memorial in memory of Victorian doctors who lost their lives in the wars of 1914-1918 and 1939-1945.

The Sir Richard Stawell Oration Fund.

During the year Dr. A. E. Rowden White made a further contribution to the corpus of the fund, and Council expressed its appreciation of his generosity.

Australasian Medical Congress, Eighth Session, Melbourne, August 22 to 29, 1952.

Members of the Branch Council constitute the General Committee of Congress, the organization of the meeting being in the hands of the Executive Committee, of which Sir John Newman Morris is President, Dr. C. H. Dickson, General Secretary, and Dr. Geoffrey Newman Morris, Assistant General Secretary.

Legislation by the Parliament of Victoria.

The following new legislation is of interest to the medical profession:

(*a*) The *Mental Hygiene Authority Act*, under which the functions formerly performed by the Director of Mental Hygiene will be carried out by an authority consisting of three members, with a medical chairman.

(*b*) Amendments to the *Medical Acts* providing for the admission, without restriction, to the medical register of holders of foreign qualifications obtaining a qualification in the University of Melbourne after a course of less than five years' duration, and providing for the admission to the register for a limited period, of holders of foreign qualifications working in research and other institutions on the representation of the institution concerned.

(*c*) Amendments to the *Workers' Compensation Acts*, extending the definition of a "worker" and providing the sum of £125 for medical and related treatment of an injured worker, the Workers' Compensation Board having power to increase the amount available at its discretion.

Business of Council.

As a further development of his plans, Sir Earle Page, the Federal Minister for Health, introduced a scheme of medical service of pensioners on a fee-for-service basis, operating from February 21, 1951. Although the rates of payment in the service are considered to be inadequate by the Branch Council, they were accepted by a majority vote of the Federal Council and most general practitioners in Victoria are cooperating in the scheme. Subsequently, an extended scheme of pharmaceutical benefits for pensioners came into operation on July 2, 1951.

Following the abandonment of the capitation system of friendly society practice by the New South Wales and South Australian Branches of the British Medical Association, the views of members of the Victorian Branch were sought by means of a general meeting and subdivisional meetings, and it being apparent that there was a unanimous wish for the abandonment of the capitation system, negotiations were opened with the Association of Friendly Societies of Victoria. It was mutually agreed that the capitation system would terminate on August 31, and on September 1, 1951, that system which had operated in Victoria for about one hundred years was replaced by a fee-for-service system, friendly societies becoming, in effect, medical insurers, their members being entitled to a refund of portion of medical fees incurred.

Following negotiations with the Fire and Accident Underwriters Association of Victoria, a new schedule of fees applicable to the treatment of injured workers, coming within the provisions of the *Workers' Compensation Acts*, came into operation on October 1. Under the new schedule fees have been increased by approximately 25%.

Assistance was given to the Department of Labour and National Service in making plans for the examination of recruits under the National Training scheme, and army authorities have since expressed appreciation of the high standard of those examinations.

On behalf of the Central Medical Planning Committee, a *questionnaire* was dispatched to all members of the Branch requesting information in reference to availability in a national emergency.

By regulation under the *Hospitals and Charities Act*, medical practitioners are, in effect, debarred from appointment as chief executive officers of hospitals, those positions being reserved for Members and Fellows of the Australian Institute of Hospital Secretaries. Legal opinion supports the validity of the regulations, but, following discussions with representatives of honorary staffs of metropolitan hospitals, representations will be made for alteration of those regulations to enable medical practitioners, by virtue of their qualifications, to be eligible for appointment as chief executive officers of hospitals.

Despite further representations to the City Council, it has not been possible to obtain any concessions in regard to parking of professional cars, and the Chief Commissioner of Police rejected a proposal that medical practitioners should be given priority in traffic.

Following inquiry, the National Safety Council of Victoria was informed that it was considered desirable that supplies of snake bite antivenine should be available in all major hospitals and in selected remote areas.

The Medico-Pharmaceutical Liaison Committee, consisting of representatives of the Branch and the Pharmaceutical Society of Victoria, which was established in 1949 to discuss matters of interest to both bodies, continued its meetings during the year.

Following a request from a wholesale drug house, a special committee was established to advise in the allocation of cortisone, and performed a valuable function until superseded by the action of the Commonwealth Government in granting import licences only to those firms allocating cortisone on the recommendation of a committee of the Royal Australasian College of Physicians.

Following the death of Mr. E. H. Ward, it was decided not to appoint a successor, and the accounts of the Branch are now being supervised by a firm of public accountants.

During the year the attention of members was again called to the rule of the Branch relating to the delivery of public lectures.

In August, Council gave approval to the establishment of "A Section for the Study of Allergic Diseases".

In the above, reference has not been made to the large volume of business arising from the activities of the Federal Council which was considered by the Branch Council, the ultimate decisions concerning which will be found in the reports of the meetings of the Federal Council in THE MEDICAL JOURNAL OF AUSTRALIA. In addition, many matters were dealt with by the subcommittees and the executive of the Branch Council.

Federal Council.

The Federal Council met in Melbourne in February and in Sydney in September. A report of the proceedings of the first meeting was published in THE MEDICAL JOURNAL OF AUSTRALIA of April 21, and a report of the proceedings of the September meeting appeared in the issue of November 10.

The Library of the Medical Society of Victoria.

During the year, 1925 books and journals were borrowed from the library. One hundred and sixty-five books were added, and subscriptions commenced to the *New York State Journal of Medicine* and the *Family Doctor*.

The Library Subcommittee considers the time has again arrived when certain of the older text-books could be discarded; they have outlived their usefulness and have little historical significance, and the space is needed for new additions. Accordingly, specialists in the different sections of medicine have been asked to mark down those they consider could be removed. As this is done, lists will be compiled and the books offered to members and to other libraries.

A large number of very old, unbound journals, mainly broken series, has been disposed of. This was a necessary procedure as the journal shelves in both the main library and the back rooms were overcrowded. It was necessary also to make a certain amount of space available for the requirements of the Congress staff in the back rooms.

Discarded journals have not been destroyed. Where possible they were given, on a permanent loan basis, to libraries elsewhere in Australia requiring the numbers to fill gaps in present holdings. Those not so disposed of were taken, on the same basis, by the Medical School of the University and the Anatomy School.

Following the removal of the old journals from the back rooms, those on the main library shelves not currently subscribed to were transferred to the back rooms. Those

remaining in the main library have been grouped into sections, for example, general, medicine, surgery *et cetera*, and it is hoped that this arrangement will be more convenient to members.

Not a great deal of use has been made of the "Rectophot" machine (for photographic extracts from books and journals), but it is anticipated that in view of the greatly increased postage rates, and especially where short articles are required, its advantages will become more apparent. It has been useful on the few occasions when articles have been requested by overseas libraries.

The Library Subcommittee expresses thanks to the following for gifts of books and contributions to the library funds: the British Medical Insurance Company of Victoria, Limited, THE MEDICAL JOURNAL OF AUSTRALIA, Dr. Robert Southby, the Alfred Hospital Board, the United States Information Library.

The subcommittee regrets the relatively small use which members make of the library, especially in view of the wide range of books and journals and the large amount of money invested in their purchase. The library has an interstate reciprocity, and books and journals required by members can be obtained from any part of the Commonwealth.

Any suggestions for improvement of the facilities of the library will be welcomed by the Library Subcommittee.

H. C. FURNELL,
Honorary Librarian.

Reports of Subdivisions.

Metropolitan.

Western Suburban.—Branch Council representative, Dr. M. H. Box. Office-bearers: President, Dr. M. H. Box; Honorary Secretary, Dr. D. D. Coutts.

Only one meeting was held during the past twelve months. This took place on Thursday, December 14, 1950, at the Mechanics Institute, Footscray, when the future of lodge medical practice was discussed. It was resolved to support the proposal to abolish contract practice and institute practice on a fee-for-service basis. The meeting was well attended.

DONALD D. COUTTS,
Honorary Secretary.

South Central.—Branch Council representative, Dr. J. Gavin Johnson. Office-bearers: President, Dr. R. Douglas Aitchison; Honorary Secretary, Dr. J. Gavin Johnson. Only one meeting of the subdivision was held during the year. This was in October, 1950, when the office-bearers for 1951 were elected.

J. GAVIN JOHNSON,
Honorary Secretary.

Southern Suburban.—Branch Council representative, Dr. G. R. Weigall. Office-bearers: President, Dr. D. Zacharin; Honorary Secretary, Dr. H. F. Tucker.

One meeting was held during the year—on December 15, 1950—when the subject under discussion was the proposed new system of lodge practice. Dr. Weigall gave a résumé of the Victorian Branch Council's consultations with the lodges up to that time. The subject was then thrown open for discussion, and the following motion was passed unanimously by the meeting:

> That this meeting is of the opinion that a fee-for-service principle should be the basis of discussion with the lodges.

H. F. TUCKER,
Honorary Secretary.

Country.

North Eastern Country.—Branch Council representative, Dr. D. D. Browne; substitute representatives, Dr. F. R. Phillips and Dr. M. Rohan. Office-bearers: President, Dr. A. H. M. Maxwell; Honorary Treasurer, Dr. E. W. Hands; Honorary Secretary, Dr. F. R. Phillips.

Two subdivisional meetings were held during the year, one in December, 1950, to discuss lodge practice, and one in August, 1951, to discuss increase of fees and workers' compensation rates of remuneration.

No post-graduate meetings have been held as, on account of the travelling involved, in the past attendances have been too small.

F. R. PHILLIPS,
Honorary Secretary.

Ballarat.—Branch Council representative, Dr. W. Sloss, senior; substitute representatives, Dr. M. Robinson and Dr. G. T. James. Office-bearers: President, Dr. E. R. G. Sheil; President-Elect, Dr. C. E. Richardson; Honorary Treasurer, Dr. P. G. Smith; Honorary Secretary, Dr. J. P. L. Griffiths. Subdivisional Council: Dr. B. Baker, Dr. G. T. James, Dr. W. R. Griffiths, Dr. W. Pryor and Dr. M. Robinson.

The annual meeting of the subdivision, at which the speaker was Dr. S. W. Williams, was held on September 20, 1950, at "The Wattle", Lydiard Street, Ballarat. After the meeting members were the guests of the President at supper.

A post-graduate week-end was held in Ballarat in February, 1951.

One of the most stimulating events of the year was the visit to Ballarat of Professor D. M. Dunlop, who spoke at a dinner on July 19, and conducted a ward round at the Base Hospital on the following morning.

J. P. L. GRIFFITHS,
Honorary Secretary.

Gippsland.—Branch Council representative, Dr. A. B. Hewitt; substitute representatives, Dr. T. O. Beatty, Dr. D. I. Fitzpatrick. Office-bearers: President, Dr. J. M. Andrew; Honorary Secretary, Dr. D. I. Fitzpatrick.

At the annual meeting, the 1950 office-bearers were re-elected and the abolition of the capitation system for lodge patients was discussed.

A meeting was held at Yallourn on November 18, 1950, at which eleven members of the subdivision were present. After the clinical meeting in the afternoon, Dr. A. Penington delivered a lecture in the evening on "Chronic Cough as Presenting Symptom: Investigation and Differential Diagnosis". Mr. Bucher, of the Alfred Hospital bacteriological department, assisted in the discussion of a case of infection with *Mycobacterium ulcerans*.

A post-graduate week-end was held at Yallourn on April 21 and April 22, the visiting lecturers being: Dr. S. Williams ("The Use of Antibiotics in Diseases of Childhood"), Mr. John Devine ("Diagnosis and Surgical Management of Conditions of the Large Bowel"), and Dr. T. H. Steel ("Chronic Diseases of the Respiratory Tract"), Dr. William Pickles, of Yorkshire ("Epidemiology in Country Practice").

DAVID I. FITZPATRICK,
Honorary Secretary.

Geelong.—Branch Council representative, Dr. D. A. Carter; substitute representatives, Dr. M. W. Morris and Dr. D. A. Kidd. Office-bearers: President, Dr. D. A. Carter; Vice-President, Dr. D. Reid; Honorary Treasurer, Dr. E. Fargie; Honorary Secretary, Dr. M. W. Morris.

Five meetings were held during the year, with an average attendance of 21. A post-graduate week-end was held in March, when Mr. R. Hooper lectured on "Sympathectomy in the Treatment of Vascular Disease", Dr. Eric Clarke on "Suppurative Conditions of the Lungs", and Dr. Bruce Anderson on "Obstetrical Emergencies following Delivery".

M. W. MORRIS,
Honorary Secretary.

North West Country.—Branch Council representative, Dr. W. J. Flanagan; substitute representatives, Dr. T. V. Walpole and Dr. B. Hutton Jones. Office-bearers: President, Dr. W. J. Flanagan; Honorary Secretary, Dr. A. L. Bridge.

The office-bearers were elected at a meeting held on May 26, 1951. A short clinical demonstration followed, when Dr. T. V. Walpole showed a case of multiple myelomatosis, Dr. A. L. Bridge presented several fractures about the elbow joint, and the meeting concluded with the screening of a film, "Post-Partum Hæmorrhage", kindly lent by Wyeth Proprietary, Limited.

Medical films are shown at Lister House, Horsham, every three weeks, and all members of the subdivision are welcome to attend. The films are provided through the good offices of the Post-Graduate Committee in Medicine in the University of Sydney.

ALAN BRIDGE,
Honorary Secretary.

Bendigo.—Office-bearers: President, Dr. A. E. Lincoln; Vice-President, Dr. A. L. Newson; Honorary Secretary, Dr. W. Rosenthal; Honorary Treasurer, Dr. H. C. Purton.

The scientific congress held as part of the Bendigo centenary celebrations on April 27, 28 and 29, in conjunction with the Australian Dental Association, formed the main activity of the subdivision for the year. Dr. Robert Fowler delivered the third Fetherston Memorial Lecture in the Bendigo Town Hall to an interested audience on Friday, April 27, and a largely attended clinical meeting was held

at the Bendigo Base Hospital on Saturday, April 28. On Saturday evening a combined dinner with members of the Australian Dental Association was held, and was followed by a combined meeting at which an address was given by Dr. B. K. Rank.

The meeting concluded with a golf tournament and luncheon on the Sunday.

W. ROSENTHALL,
Honorary Secretary.

South Western Country.—Branch Council representative, Dr. W. R. Angus; substitute representatives, Dr. L. J. Westacott and Dr. H. C. Maling. Office-bearers: President, Dr. H. C. Maling; Vice-Presidents, Dr. A. Brauer and Dr. G. Watson; Honorary Secretary, Dr. W. R. Angus; Assistant Secretary, Dr. B. D. Vaughan; Committee, Dr. I. Buzzard, Dr. C. B. Berryman, Dr. R. B. Knox, Dr. S. C. Fitzpatrick and Dr. L. J. Westacott.

During the last twelve months the members of the subdivision have been active, both in the medico-political and the scientific field. We have also extended invitations beyond the boundaries of the subdivision, and have been pleased to welcome visitors from Colac and Mount Gambier.

Dr. B. Rosse Woods completed a successful term as President on August 12, 1950, and Dr. Maling was then elected to the position.

The August meeting was held at Hamilton and Mr. A. R Wakefield gave a most interesting lecture illustrated by beautifully coloured Cinesound films entitled "Tendon Injures in the Hand".

The annual week-end meeting arranged by the Melbourne Permanent Post-Graduate Committee was held at Warrnambool on November 17 and 18. Twenty-eight members attended.

The course covered a wide range of subjects, namely: jaundice, hypertension, ano-rectal surgery and hormones in gynæcology.

On December 12, 1950, a special meeting was held at Mortlake to discuss the new system of lodge practice, and Dr. C. H. Dickson and Dr. D. Roseby, representing the Branch Council, addressed the meeting.

A meeting was held at Terang on February 17, at which the subdivision decided to make representation to the Branch Council for the extension of free diagnostic service to base hospitals. This meeting concluded in the evening with a lecture by Mr. Russell Howard entitled "Surgery of Childhood".

Dr. W. Pickles, of Yorkshire, delivered an interesting lecture at Hamilton on April 28, 1951, entitled "Epidemiology in General Practice".

On August 18 a meeting was held at Koroit, when Dr. John Horan delivered a full and comprehensive lecture entitled "Epigastric and Substernal Pain", illustrated by lantern slides.

Meetings have been well attended during the year and members have derived much benefit from the discussion.

W. R. ANGUS,
Honorary Secretary.

Reports of Sections.

Ear, Nose and Throat.—Office-bearers: President, Dr. Walter Williams; Vice-President, Dr. Denis O'Brien; Honorary Treasurer, Dr. Frank Shanasy; Honorary Secretary, Dr. Rory Willis.

The annual meeting of the section was held at the Eye and Ear Hospital on May 29, 1951. Clinical cases were shown and office-bearers elected. The following were elected to represent their hospitals: Dr. Rex Blaubaum, Alfred Hospital; Dr. R. Willis, Royal Melbourne Hospital; Dr. C. Pyman, Children's Hospital; Dr. H. Watson, Prince Henry's Hospital; Dr. D. O'Brien, Saint Vincent's Hospital; and Dr. Roy Stevens, Eye and Ear Hospital.

During the year three meetings were held in addition to the annual meeting. On August 29, 1950, a clinical meeting was held at the Eye and Ear Hospital; on November 28, 1950, neurological cases of interest were presented to the section by Dr. J. Billings; and on August 31, 1951, a combined meeting with the Australian Society of Anæsthetists was arranged and held at 49 Mathoura Road, Toorak.

R. WILLIS,
Honorary Secretary.

Radiology.—Office-bearers: President, Dr. Brian Serjeant; Honorary Secretary, Dr. Gwynne Villiers; Honorary Treasurer, Dr. Peter Davis.

Clinical and business meetings were held throughout the year on the fourth Tuesday in each month in the Council Chamber of the Medical Society Hall.

The months of May and June were filled with the F.F.R. examinations. These were conducted by the visiting examiners, Dr. Montague Jupe and Dr. Brian Windeyer.

GWYNNE VILLIERS,
Honorary Secretary.

Preventive Medicine.—Office-bearers: President, Dr. H. M. James; Honorary Secretary, Dr. R. J. Farnbach; committee members, Dr. S. G. Anderson, Dr. W. J. Stevenson and Dr. M. Wilson.

Meetings of the section have been held during the year in the late afternoon on the first Thursday of each alternate month. Subjects which have been discussed included "Preventive Medicine in Relation to Allergic Diseases", "Bacteriological Aspects of B.C.G." and "Endemiology of Family Practice". In addition, a demonstration of industrial hygiene activities was given. Discussions which followed the lectures were of considerable interest.

Members also had the opportunity of meeting Dr. William Pickles, who was in Australia on a visit from England.

It is hoped that the choice of subjects for discussion next year will have a wide appeal to all members, particularly those in general practice.

R. J. FARNBACH,
Honorary Secretary.

Ophthalmology (the Ophthalmological Society of Australia, Victorian Section).—Office-bearers: President, Dr. S. Gerstman; Honorary Secretary, Dr. J. McB. White.

During the past year, talks on their overseas trips have been given by Dr. Nancy Lewis and Dr. G. Sutherland.

Several meetings were held to discuss fees, in particular industrial fees. The society has decided to form an Institute of Ophthalmology and a committee has been appointed to go into the matter.

J. McB. WHITE,
Honorary Secretary.

Physical Medicine (the Australian Section of Physical Medicine, British Medical Association).—Office-bearers: President, Dr. F. May; Vice-Presidents, Dr. L. T. Wedlick and Dr. Wilkie Smith; Secretary and Treasurer, Dr. C. M. Marshall; Committee Executive Members, Dr. Parr and Dr. Shanasy.

The annual meeting of the Section was held in Brisbane from July 25 to 27, 1951, inclusive. The conference took the form of a series of papers delivered by members and demonstrations (including a clinical meeting), concluding finally on the evening of July 27 with a dinner which was followed by the annual meeting.

After the minutes, correspondence and financial statement had been dealt with at the annual meeting, Dr. Wilkie Smith, the retiring president, delivered his presidential address, which embraced the latest trends of treatment, including ultrasonic sound waves applicable to physical medicine.

C. M. MARSHALL,
Honorary Secretary.

Clinical Pathology.—Office-bearers: Chairman, Dr. H. J. Gardner; Honorary Secretary, Dr. J. D. Hicks; Honorary Treasurer, Dr. G. Harkness; committee, Dr. A. W. Pound and Dr. A. V. Jackson.

At the annual general meeting, Dr. John McLean spoke on "Some Aspects of the Diagnosis and Treatment of Leuchæmia". General meetings during the year have been addressed by Dr. John Perry and by Dr. R. Motteram on their experiences during recent visits to England and America. At the July meeting, Dr. I. R. McDonald, of the physiology school research team, presented the clinical and biochemical aspects of anuria, a subject which evoked keen discussion.

J. D. HICKS,
Honorary Secretary.

On behalf of the Branch Council,

ROY F. WATSON, President.
H. G. HILLER, Honorary Secretary.
C. H. DICKSON, Medical Secretary.

The Council records its appreciation of work done during the year by Dr. C. H. Dickson, the Medical Secretary, and the office staff.

ROY F. WATSON,
President.

Addendum.

The following reports are published on behalf of the bodies named.

The Melbourne Permanent Post-Graduate Committee.

Following the usual practice, courses during the year were conducted for higher degrees and diplomas, as well as the refresher course in obstetrics and gynæcology.

Twelve week-end courses were arranged in country centres. The numbers attending and interest displayed encouraged the view that these should be continued and if possible extended.

This year the clinical post-graduate week was held towards the end of October, for the earlier part of the week a symposium on infectious diarrhœa being arranged in conjunction with the physiology and bacteriology departments of the university. This was held at the Royal Melbourne and Children's Hospitals, and was followed by a three-day course conducted by the Royal Melbourne Hospital. Special attention was devoted to cardiology and advantage taken of the presence in Melbourne of Dr. Paul Wood, Dean of the Institute of Cardiology, London, who played an active part at the meeting.

An indication of the activities of the committee is given by the following figures:

In 1950, numbers attending courses—564 (including 20 from other States and overseas, and including 184 attending country courses).

Contacts made with doctors apart from those who attended courses—119, totalling in all 683.

The number of set lectures and demonstrations provided was 499.

Arrangements were made overseas for 40 doctors for post-graduate training.

In 1951, numbers attending courses and contacting the committee totalled about 600. One hundred of these were post-graduates attending courses for higher degrees or diplomas.

In the first nine months of the year arrangements were made for 39 doctors to study overseas for higher degrees or further medical studies.

Complete figures for 1951 will be given in the next report.

During the past year, the committee has been associated with the visits of a number of distinguished medical visitors from the United Kingdom to Australia, and has thus been able to arrange lectures and discussions which have proved of great interest to the profession.

Professor Matthew Stewart, formerly Professor of Pathology, University of Leeds, was in Melbourne during March and April, 1951. He lectured on "Chronic Peptic Ulceration with Special Reference to Ulcer Cancer" and on "Silicosis and Asbestosis", and also gave post-mortem demonstrations at the Pathology School and at the teaching hospitals. His great experience and teaching ability were thus made fully available.

Dr. William Pickles, a distinguished authority on epidemiology resulting from his careful observations on the subject during many years of general practice in Yorkshire, visited Victoria in April, 1951. He gave two lectures in Melbourne—"Epidemiology in Country Practice" and "Research in General Practice". Arrangements were made for him to visit a number of country centres and deliver the former of these lectures at Shepparton, Yallourn and Hamilton to most interested audiences. He has shown us an example of the valuable results still to be obtained from such research work in a busy country practice, ably supported, it should be said, by his wife. In this way he has carried on the tradition of such great figures in medicine as Jenner and Mackenzie.

Mr. C. Naunton Morgan, F.R.C.S., honorary surgeon at Saint Bartholomew's and Saint Mark's Hospitals, London, visited Melbourne in August, 1951, and gave a particularly stimulating series of four lectures on conditions of the colon and rectum. He also gave clinical demonstrations at the various teaching hospitals. He left a lasting impression as a great exponent of British clinical teaching.

Professor B. W. Windeyer and Dr. M. H. Jupe, who visited Australia under arrangements made by the College of Radiologists (Aust. and N.Z.) to conduct examinations for the F.F.R., gave one lecture each in Melbourne on the subjects "The Place of Radiotherapy in the Treatment of Malignant Disease" and "The Influence of Diagnostic Radiology in Medicine" respectively.

Sir Edward Mellanby, formerly secretary of the Medical Research Council for many years and at present in charge of the Nutritional Section of the Medical Research Institute, was invited to Australia as one of the guests for the jubilee celebrations of the Commonwealth by the National University. In August and September, he delivered lectures on "The Future of Medical Science" and "Medical Research and the State" under arrangements made by the University of Melbourne Extension Committee with the British Medical Association (Victorian Branch), the Australian Dental Association and this committee. Lady Mellanby, a distinguished research worker in the dental field, also delivered an address entitled "Nutrition and Dental Disease". This series attracted audiences representative of many different interests and served to emphasize the value of collaboration between such organizations as those concerned.

By invitation of the faculty of Medicine, the committee is now represented on that body and is thus brought into closer touch with university problems affecting medical post-graduate education, particularly in regard to the teaching for higher degrees and diplomas.

There have been two changes in membership of the committee. Professor E. S. J. King is now one of the representatives of the Faculty of Medicine. The committee regards itself as fortunate in that Professor P. MacCallum, whose place Professor King has taken, still remains a member, representing the Science Subcommittee of the Victorian Branch of the British Medical Association. Dr. J. W. Johnstone replaces Dr. Elliott True as the representative of the Women's Hospital. Dr. True, during his tenure of this position, acted as a valuable link between the committee and the hospital. The committee is grateful for the good services he gave.

The committee has suffered a great loss in the recent death of Dr. B. Milne Sutherland. The late Dr. Sutherland was first appointed to the committee in 1935 as one of the two representatives of the Victorian Branch of the British Medical Association, and has since acted continuously in that capacity. He was a regular attendant at meetings and took a lively interest in the activities of the committee. His constructive and forceful advice was of great value and he has left a place that will be very difficult to fill. The committee owes him much and mourns his loss.

W. W. S. JOHNSTON,
Director.

The British Medical Insurance Company of Victoria, Limited.

The following is the annual report, over the signature of the chairman, Sir John Newman Morris, submitted to members of the company at the ordinary general meeting held on Monday, July 16, 1951.

The directors have pleasure in submitting for your approval the balance sheet, profit and loss account and appropriation account for the twelve months ended April 30, 1951.

The results of the year's operations (as disclosed in the profit and loss account) have not, in the opinion of the directors, been materially affected by any items of an abnormal character.

The total premiums written for the year were £45,422, as compared with £36,999 last year.

Net profit for the year was £3349 16s. 11d. after providing £1600 for taxation.

The appropriation account shows that £639 was allocated during the year to various institutions connected with the medical profession.

Up to date the company has given books to the value of £2225 and £10,575 in cash to the Medical Society of Victoria, and more than £1000 to various sub-branches of the British Medical Association and other institutions connected with the medical profession. It has also taken up debentures of the Medical Society to the value of £3750, upon which it is accepting interest at the rate of only 1% *per annum*, which, of course, saves the Medical Society a considerable sum in interest.

During the year a loan of £4000 was made to the Medical Society of Victoria to finance the purchase of an estate agency. This is in addition to the £3150 lent to them last year to finance a building purchase.

The directors feel that members of the British Medical Association will be interested to know of the benefits that they have received through the activities of this company, and feel sure that the knowledge will strengthen the already solid support given by the profession.

British Medical Agency of Victoria Proprietary, Limited.

In April of this year, the British Medical Agency moved into the offices of H. L. Finlay Proprietary, Limited, on the ground floor, Bank of Australasia Building, 81 Collins Street, Melbourne. The shares in the company formerly conducted by Mr. Finlay have been purchased by the Medical Society of Victoria, with the assistance of a loan from the British Medical Insurance Company of Victoria, Limited, and the business is now managed by Mr. G. Feeley, in conjunction with the British Medical Agency, and as Mr. Finlay was managing agent for many professional buildings in the east end of Collins Street, the two businesses run smoothly together.

The Medical Agency has had a very successful year, despite the exceptionally high purchase price for practices and professional residences.

Directors of the agency for the year ending June, 1952, were reappointed as follows: Dr. C. H. Dickson (chairman), Dr. Douglas Thomas, Dr. G. S. Robinson, Major-General F. Kingsley Norris.

INSTALLATION OF THE PRESIDENT FOR 1952.

Dr. R. F. Watson introduced the incoming President for 1952, Dr. Charles Byrne, and installed him in the presidential chair. Dr. Byrne thanked the members for his election and paid a tribute to Dr. Watson, who had done a magnificent job in most difficult circumstances.

PRESIDENT'S ADDRESS.

Dr. R. F. Watson then read the retiring president's address (see page 133). Sir Victor Hurley proposed and Dr. A. E. Coates seconded a vote of thanks to Dr. Watson for his address. The vote was carried by acclamation.

VOTE OF THANKS.

A vote of thanks to Dr. B. D. Fethers, the retiring member of the Council, was carried on the motion of Sir John Newman Morris.

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

SIR JAMES McGRIGOR, D.G.M.S., TO UNDER SECRETARY STEPHEN.[1]

Army Medical Dept., London,
27 June, 1837.

Sir,

With reference to yr letter of 20 Decr. last rel. to a New Organization of the Colonial Hospitals in NSWales and to my letter of the 31st of the same month, I beg to submit for the information of Lord GLENELG the following statement.

I regret much to find by the Correspondence of the Deputy Inspector General of Hospitals that he experiences great difficulty in carrying into Execution the Instructions with which he was charged under the order of the Lord Commrs of the Treasury and of the Secy at war.

I am inclined to agree with Mr Thomson in his statement that, if permitted fully to carry thro' the Instructions, and new model the Medical Dept in the Colony, a very considerable saving of public money wd be effected. Mr Thomson complains that he has met with vexatious obstruction from some of the Colonial Medical Officers at the outset: perhaps it is but natural that some of these gentlemen shd at first feel a new control irksome, and complain of more duty being imposed on them than under the old system, so as to interfere with lucrative Private Practice or their avocations as Agriculturists: but I trust that Ld Glenelg will see the necessity of giving support to the officers sent out, as I feel confident that, if the new system is persevered in, great advantage to the Public with much saving of money will accrue. I am not prepared in every instance to support the tone of Mr Thomson's querulous correspondence: and I have so expressed my disapprobation of it that I trust the most zealous and experienced officer in the duty he has undertaken, will henceforth be more respectful in all his correspondence with the Governor, as well as with all heads of Departments of that service: and I am of opinion that henceforth no infirmity of temper will be betrayed by the Deputy Inspector General of Hospitals, for he has been informed, if such shd appear, that he will be superseded by an officer on whose discretion, prudence, and zeal for the service I can fully rely. In justice however to Mr Thompson, I ought to say that during a long period of service I have ever found him an able and honorable officer, one who has constantly evinced the most indefatigable zeal on every service on which he has been employed, acting with discretion, prudence, and forebearance: I therefore entreat for him the support of Ld Glenelg in the execution of the important and arduous duties of his appointment.

I ought to state that only 2 of the Colonial Medical Officers persevere in their resistance to his orders.

. . . . . .

J. McGRIGOR,
Inspector General.

[1] From the original in the Mitchell Library, Sydney.

Correspondence.

THE THERAPEUTIC USES OF CORTISONE AND ACTH.

SIR: May I congratulate Dr. Selwyn Nelson on his special article on the uses of cortisone and ACTH? His review of this wide field, with its many aspects, will be of value to all.

On only one of these aspects—the use of these drugs in rheumatoid arthritis—can I speak from a small experience. Dr. Nelson sounds a note of caution and rightly reminds us that the hormones are still in the experimental stage. This is true, but the knowledge we have to hand should enable us to take a more simple view of many of the problems. If cortisone were cheap and plentiful it would now be freely in use, with great benefit to the majority of rheumatic patients. I have no doubt that it will be of value in preventing deformity by keeping early signs suppressed. But no patient with chronic rheumatism should have cortisone without a guarantee of continuity of treatment. The fact that it is not a cure will not dissuade the wise physician from employing it, subject to a careful watch for ill effects. For this nothing more complicated than careful clinical observation is required. There is no known biochemical or hæmatological test which will help us to predict either the outcome of treatment or the onset of complications and side effects. Signs of over-dosage are rarely so urgent as to require any measures more active than simple withdrawal of the drug.

Cortisone and ACTH should be given continuously for chronic rheumatism, or not at all. There is little to be said in favour of the intermittent method of treatment, with intervals of three or four weeks between courses. Almost invariably these mean disheartening relapses with recurrence of all the symptoms.

At the European Rheumatology Congress at Barcelona in September last, Dr. C. H. Slocumb said that this method had been condemned at the Mayo Clinic. With continuous treatment, on the other hand, rheumatic symptoms had been kept suppressed for one to two years in 71% of some 200 patients with doses of 25·0 to 62·0 milligrammes of cortisone daily, with negligible side effects. With doses less than 75 milligrammes per day troublesome side effects were seldom seen in men and were not common in women. The treatment had never caused diabetes or high blood pressure, though three patients with diabetes had been made worse. In most cases symptoms could be brought under control with 75 to 100 milligrammes daily; Slocumb is abandoning the initial stage of two or three doses per day.

Copeman and all the other speakers at the congress were equally emphatic in their condemnation of the intermittent method. So also is Steinbrocker (*Bulletin of the New York Academy of Medicine*, September, 1951), who recently reported results of long-term treatment which agree closely with those of Slocumb.

I have a male patient whose symptoms have been continuously under control for more than a year—with no ill effects—with a daily dose of 100 milligrammes of cortisone. Each patient presents a separate problem; the dose should be tapered off to the lowest amount—with the longest

interval between doses—that will keep symptoms suppressed. A female patient, who has been continuously under treatment by Dr. Kate Mackay for a year, has gradually tapered off until she is now having only 30 milligrammes at intervals of a week. If she goes without cortisone for longer than this, painful swelling of the hands and feet reappears.

With ACTH, too, it is often possible to reduce the frequency of injection considerably below that recommended by Dr. Nelson. I have a young male patient who has been continuously under treatment for six months; for four months he has maintained suppression of symptoms with ten units of ACTH every thirty-six hours. Another patient is able to keep symptoms suppressed with five units every twelve hours, though not with ten units every twenty-four hours. As with cortisone, each patient is a separate and individual problem.

Yours, etc.,

34 Queens Road, MICHAEL KELLY.
Melbourne,
January 11, 1952.

THE IMPORTANCE OF THE RELATIVITY OF BLOOD PRESSURE AND OTHER SIGNS IN THE PREVENTION OF ECLAMPSIA.

SIR: Your publication of the paper by Dr. Dixon Hughes (December 29, 1951) on the methods by which eclampsia has been almost completely eliminated at the Women's Hospital, Crown Street, Sydney, is a welcome vindication of the opinions of those who have believed that eclampsia is a preventible condition.

There is, however, one point relating to eclampsia which I feel needs further investigation as a possible aid to antenatal work. At the last Congress of Anæsthetists in Britain Professor MacIntosh, from the Department of Anæsthetics at Oxford (*British Medical Journal*, September 22, 1951, page 733), described the results of investigations he had made with the electroencephalogram upon patients who had had previous eclamptic fits. Five out of six of these patients showed an abnormal cortical rhythm. About 12% of all persons examined have an abnormal rhythm, and it is among this group that epileptics are found. Hence, it appears that an abnormal cortical rhythm is a sign of a "convulsive diathesis".

If Professor MacIntosh's results are confirmed it appears that we should regard eclampsia as being due to the coincidence of two causes: (i) a fundamental cause, which is the convulsive diathesis, and (ii) an exciting cause, pre-eclampsia. If this is so we may regard the pure obstetrical syndrome due to pregnancy as preeclampsia alone. Pre-eclampsia induces eclampsia by increasing the irritability of the nervous system. Believing as I do that steroid hormonal activity plays an important part in the production of preeclampsia, I find it interesting to note that there are already reports that ACTH and cortisone treatment accelerate the α-wave rhythm of the cortex.

It seems, then, that certain patients carry a hereditary tendency to eclampsia, but that the fits are preventible, because it is possible to eliminate completely their exciting cause.

Yours, etc.,

39 Irvine Street, J. C. EDWARDS.
Peppermint Grove,
Western Australia.
January 4, 1952.

AUSTRALIA'S ROLE IN THE CONTEMPORARY COMMONWEALTH.

SIR: I was very interested in Professor Fred Alexander's address to The Royal Australasian College of Physicians on "Australia's Role in the Contemporary Commonwealth", and the leading article in THE MEDICAL JOURNAL OF AUSTRALIA, January 5, 1952.

It was pleasing to note that the final year students of the University of Witwatersrand sought Professor Alexander's help in arranging that graduands from South Africa medical schools might spend twelve months' training in Australian hospitals. Professor Alexander is of the opinion that there should be opportunities for direct contact between the several dominions, and that these should be explored at all levels. The University of Queensland Medical Society attempted in 1946 to introduce a scheme for the international exchange of medical students; but the difficulties of finance, accommodation, transport and curricula proved insuperable, and the scheme had to be dropped. The South African medical students have suggested that an interchange of graduands might be arranged, but there are very many preliminary problems which must be solved.

It would appear that universities do not make themselves responsible for graduands. The formal education of a medical student ceases on graduation, and there is no body especially concerned with the education of young graduates. Most of these spend twelve months in a hospital after graduation, but the hospitals it would seem are interested in the hospital needs rather than in the continuing education of young graduates. This may be changed when the day is named for the compulsory year in hospital provided for by the *Medical Act*, passed recently in Great Britain.

The first thing to be done then is for somebody to act, or to have the power to act, on behalf of young Australian medical graduates. As far as I can determine, the National University at Canberra, the Federation of Post-Graduate Committees, and the Federal Council of the British Medical Association have not the necessary authority.

If the Federal Council thinks fit, it might approach the Federal Government to arrange to do something to give effect to Professor Alexander's suggestions and those of THE MEDICAL JOURNAL OF AUSTRALIA. What is required is action to be taken along the lines adopted by the British Council and by the Fulbright Scheme.

If this is done it should be possible to solve the difficulties encountered by the University of Queensland Medical Society, and to put a plan into operation that will meet the requirements so realistically expounded by Professor Alexander.

Yours, etc.,

E. S. MEYERS.
The University of Queensland Medical School,
Herston Road,
Brisbane, N.1.
January 5, 1951.

A CRITICISM.

SIR: I was interested in the letter from Dr. Pitt published in THE MEDICAL JOURNAL OF AUSTRALIA of December 22, 1951. Dr. Pitt criticizes the Editor for not publishing an article on the use of antibiotics. I believe that the use of the antibiotics has been adequately covered in the abstracts from medical literature in THE MEDICAL JOURNAL OF AUSTRALIA in recent years; for example, there are abstracts on terramycin on December 22 and 29, 1951, and on January 5, 1952.

I know that the Editor tries to publish articles on matters of general interest, such as the recent article on cortisone, but I understand that it is not always possible to get suitable medical men to write articles summarizing new methods of treatment. A great deal is dealt with in the abstracts, however. Perhaps members are expected to read what is published in the journal and refer to the published information for guidance. Possibly the Editor may be able to persuade Dr. Pitt to write an article on the antibiotics. It has been truly said that there is no better way of mastering a subject than by writing an article on it.

Yours, etc.,

143 Macquarie Street, G. C. WILLCOCKS, F.R.C.P.
Sydney,
January 9, 1952.

SIR: You may have observed that in the heat of summer the temper of the average Australian doctor is apt to become frayed, and that our excessive humidity is conducive to a certain degree of physical and intellectual laziness. It must be, therefore, a matter of some surprise and gratification to many that under the recent meteorological conditions some of us are able to summon enough courage and mental energy to commit our thoughts to paper and give free expression to our opinions on the subject of editorial policy as affecting the contents of THE MEDICAL JOURNAL OF AUSTRALIA.

Now this is my great opportunity: your editorial policy allows me the privilege, as a form of occupational therapy, to sit down and write you a long letter; when, for the time being, I can look upon you as a willing if, perhaps, coldly

unresponsive, pen-friend. But, irrespective of what your editorial reaction may be to this humble communication of mine, I am strongly of the opinion that any doctor who is capable of writing a convincing epistle to the taxation commissioner should not hesitate to take advantage of the freedom of expression graciously conceded to all of us in your correspondence columns, thus helping to create a more general interest in the journal and to refute any suggestion that the profession in this country has a one-track mind.

And this brings me to the point I wish to make: I was keenly disappointed to find that in a categorical survey of the many good and bad features displayed in the columns of the medical journal, no mention was made of the responsible, arduous and conscientious work consistently followed up throughout the year by our medical colleagues in reading and reviewing the latest publications in order that readers may be given a fair estimate of their value as a contribution to knowledge or as a stimulus to the mind. And let it be remembered that these labours are gladly undertaken in the midst of the heavy demands of a teaching post or a busy practice. Even if some of your readers remain emotionally unaffected by such topics as "The Rh Types of Papuan Natives", I trust sincerely that in future all members of the profession will spare time for just a fleeting glance at the columns under "Reviews", while saying a little prayer for those writers who are devoting much time and energy (in all weathers) to the edification of their colleagues, and are helping to make their journal sought after by publishers the world over as a medium for an impartial criticism and commendation of their books.

Finally, Mr. Editor, I will be intrigued to discover to what extent editorial policy or paper shortage (the terms are sometimes confused) will cause this literary effort to be wasted on the desert air. On the other hand, should the ideal of freedom of expression still prevail in your office, I would be greatly obliged for a little attention to my spelling, phraseology and punctuation before it is frozen in cold print.

Yours, etc.,

Parramatta, K. MACARTHUR BROWN.
New South Wales,
January 12, 1952.

SIR: As a reader of your journal for thirty years, I feel some reply is indicated to Dr. Pitt's letter, which appeared in THE MEDICAL JOURNAL OF AUSTRALIA of December 22, 1951.

Having reported several cases from time to time, some common, others rather rare, one appreciated the opportunity of presenting details of same to the profession, and in the absence of a medium for same, much stimulus to recording would disappear, and in addition, much overlapping would occur.

The same applies to records of congress, scientific meetings of branches, and meetings of individual sections of medicine, some of which are not of much interest to the general practitioner.

Detailed records of meetings of Federal and State councils are also tedious at times, but pregnant with interest at others.

It has always astonished me how room has been found for the varied coverage given to us in our weekly THE MEDICAL JOURNAL OF AUSTRALIA.

I am, however, prepared to agree with Dr. Pitt that at times very little of practical value can be found in much that is published, and have always read with great interest the refresher course weekly articles which have for some time been appearing in the *British Medical Journal*.

This section could with advantage be added to our THE MEDICAL JOURNAL OF AUSTRALIA, with reference to recent current medical publications covering the article. Very often a good book on a particular subject is not known of by practitioners remote from a capital city, and recommendation by a prominent member of the profession would assist in wise building up of one's medical library.

There might also be room for some improved grouping of articles under the appropriate heading of gynæcology, surgery *et cetera*.

Finally, may not the time have arrived when we could have a monthly Australian journal of medicine, surgery, gynæcology, orthopædics and obstetrics, which could cater for research and special articles on specialist subjects, thus leaving our journal more room to report subjects of more interest to the general practitioner, who, after all, comprises a large percentage of the profession in Australia?

There is also room for a detailed compilation of all interesting articles on particular subjects, so that quick reference is available, without having to wade through years of journals. Does this work appeal to any of your readers?

Yours, etc.,

17 Boulder Road, H. T. ILLINGWORTH.
Kalgoorlie,
Western Australia.
December 25, 1951.

SIR: Dr. T. Rose, in his letter published on January 12, 1952, in writing of THE MEDICAL JOURNAL OF AUSTRALIA, says: "Here in Australia . . . apart from it there are only *The Australian and New Zealand Journal of Surgery*, the new half-yearly journal of the Royal Australasian College of Physicians and *The Australian Journal of Experimental Biology and Medical Science*."

Dr. Rose has apparently missed reading your leading article of THE MEDICAL JOURNAL OF AUSTRALIA, September 15, 1951, entitled "Dermatology and its Development in Australia", wherein you were kind enough to comment favourably on the first issue of the *Australian Journal of Dermatology*. I have drawn his attention to this half-yearly publication of the Dermatological Association of Australia (British Medical Association) by sending him a copy of the second number. He will find it of value not only for the dermatological specialist, but, in the words of an overseas commentator, "of especial interest to the general practitioner an unexpectedly large proportion of whose work is to do with skin ailments".

Yours, etc.,

ADRIAN JOHNSON,
Editor, *Australian Journal of Dermatology*.

185 Macquarie Street,
Sydney,
January 14, 1952.

"COLLES FRACTURE."

SIR: Will any of your readers indicate the meaning of "Colles fracture"? Does it for instance mean any fracture of the lower extremity of the radius? And if so, would the term "fracture of lower extremity of radius" or similar term suffice? Or does it mean a particular kind of fracture of the lower extremity of the radius, and if so, which? In any case what is the value of using the qualification "Colles"? Are most practitioners guided by the practice adopted even of senior surgeons using this term, already established in common usage for at least sixty years, at a time when accurate diagnosis of fractures at the wrist was impossible.

It is surely high time the use of the expression "Colles fracture" be abandoned in favour of terms embracing a description of the fracture involved, of which there are very many varieties indeed, distinguishable only by röntgenological examination.

Yours, etc.,

52 Abbott Street, H. FLECKER.
Cairns,
North Queensland.
January 2, 1952.

THE NOTIFICATION OF TUBERCULOSIS IN NEW SOUTH WALES.

SIR: From his sylvan retreat in the northern suburbs our Deputy Director of Health has made a contribution to this correspondence.

He attempts a defence of his department's attitude in ignoring the recommendation of the National Tuberculosis Advisory Council and refusing to fall into line with the other States in payments for tuberculosis notification. It is to be hoped that authority in these States will be duly chastened by his pious homily on "public duty", coconut milk extraction, and kindred subjects.

The point which he entirely overlooks is that tuberculosis notification differs completely from that of other infectious diseases. Medical opinions are required on the stage of the disease and the radiological examination, and the precise method of sputum examination is also postulated—all these are in excess of what is asked for in other infectious diseases. These are quite apart from the nine questions practitioners in this State are "privileged" to answer—if they choose.

The most important aspect of Dr. Wallace's letter, however, is in the spotlight it throws on the mental reactions of some members of the Public Health Department. It shows a psychology of defeatism and a negativistic attitude which has made the Tuberculosis Division an object of complete perplexity to visitors from abroad, of the utmost concern to the Health Department at Canberra, and of pity or derision to similar divisions in other States.

Yours, etc.,

137 Macquarie Street, Sydney, January 16, 1952. COTTER HARVEY.

CURARE AND ELECTRO-CONVULSIVE THERAPY: A SIMPLIFIED TECHNIQUE.

SIR: With reference to the article by Dr. R. Ramsay Webb on the use of curare in electro-convulsive therapy in the absence of sodium thiopentone, I would like to make the following comments: Firstly, the small series of cases reported, sixteen in two and a half years. Secondly, the use of curare in the absence of sodium thiopentone. The method described by Dr. Webb was tried, reported on overseas, and abandoned several years ago.

As an anæsthetist, I have seen a number of cases in which patients were curarized while conscious, and in every case the patients have been uniformly terrified and felt that they were going to die. Even with light curarization, such as Dr. Webb suggests, the feelings of the patients can hardly be described even as comfortable. Also, with the slight degree of relaxation that "Tubarine" produces with respiration still present, the shock is only slightly "softened", not nearly enough for many cases, such as recent fractures.

I have administered well over 1500 anæsthetics for electro-convulsive therapy during the last eighteen months, and have found the slow onset and length of curarization of "Tubarine" too prolonged. I have tried all combinations of the different curarizing agents with and without sodium thiopentone (decamethonium iodide, dimethyltubocurarine iodide, "Flaxedil" and "Tubarine"). The most successful, safest and simplest method is the use of sodium thiopentone 0·2 gramme to 0·3 gramme (four to six cubic centimetres) with "Flaxedil", in the dosage of seven milligrammes per stone body weight for females and eight milligrammes per stone body weight for males. The two drugs are mixed in the one syringe and given intravenously. Controlled respiration with bag and mask is administered for sixty seconds, and the shock is then given. Cyanosis practically never occurs, and full respiration is returned within three to five minutes. Where several cases are given electro-convulsive therapy in one hospital with this technique about one treatment can be given every six to eight minutes.

With a method such as this it seems rather hard that any patient be subjected to a sensation which at the very least can only be described as extremely unpleasant when the pleasant "sleep" of sodium thiopentone is available so easily. Also with this method the degree of relaxation can be controlled at will by merely adjusting the "Flaxedil" dosage.

With the above anæsthetic technique recent extremity fractures, cases of advanced pregnancy, thyreotoxicosis, spondylitis and recent crush fracture of the vertebræ have been given electro-convulsive therapy without any cause for concern.

I would like to thank Dr. H. F. Maudsley, Dr. John F. Williams and Dr. P. Guy Reynolds for their help and encouragement in this work.

Yours, etc.,

299 Riversdale Road, Camberwell, E.6, Victoria. January 15, 1952. VAL. T. STEPHEN.

Obituary.

BERTRAM MILNE SUTHERLAND.

WE are indebted to Dr. Colin Macdonald for the following appreciation of the late Dr. Bertram Milne Sutherland.

In the late sixties of last century, a young Edinburgh graduate named John Sutherland was practising in the remote parish of Bower, in the extreme north-east of Scotland, not far from John o' Groats. Like many others of that period, he believed that medical prospects were brighter in Australia, and consequently migrated, to settle in 1871 in the then prosperous mining town of Dunolly, 125 miles from Melbourne, and nearby where had been unearthed two years previously the "Welcome Stranger", the world's largest nugget (worth on present-day values the tidy sum of £36,000). Dr. John Sutherland married Christina Milne, and in 1877 was born their only son, Bertram Milne Sutherland, the subject of this memoir.

Among Bertram's schoolfellows in Dunolly were the local minister's son, now Sir Harry Lawson, and a schoolmaster's son, who was to become Flynn of the Inland. In 1886 the family moved to Moonee Ponds, a Melbourne suburb, and Bertram was sent to the South Melbourne College, a private school, like many others of its class, now no more, but then a great force in Victorian secondary education; the success

of this school, frequently dominant in the matriculation scholarships and exhibitions, was due to an outstanding headmaster, J. B. O'Hara, who was not only a brilliant mathematician and teacher, but also a poet possessed of a lyric quality which fell perhaps just short of greatness. But O'Hara kindled no mathematical or poetical fire in this pupil, who proceeded to the Melbourne Medical School and graduated M.B. in 1903, contemporary with J. H. Cumpston, Harvey Sutton and Allen Robertson. Sutherland went to London subsequently, and was on the eve of sitting for the primary Fellowship when news of his father's fatal illness forced a return to Melbourne to take over the family practice. Though denied the English higher surgical diploma, he was made a foundation Fellow of the Royal Australasian College of Surgeons, and just last year, when aged seventy-four years, he was elected a Fellow of the Royal College of Gynæcologists, than which probably nothing in a long professional life gave him greater happiness—he regarded it as the fulfilment of his whole career. The O.B.E. was awarded at the conclusion of the first world war, during which he had served for five years in Egypt and England, reaching the rank of lieutenant-colonel on taking the command of Number 3 Australian Auxiliary Hospital at Dartford, Kent.

In 1910, a vacancy occurring as anæsthetist at the Women's Hospital, Sutherland was appointed, thus commencing a long and intimate association of forty-one years. Michael Ulick O'Sullivan, considered by Sutherland to be one of the deftest surgeons he had ever watched, was then chairman of the honorary staff. Four years later, Sutherland

became an honorary outdoor surgeon, and those were the days, just prior to the outbreak of the first world war, when Felix Meyer, George Horne, R. H. Fetherston and Reginald Morrison were the Melbourne authorities on diseases of women. Sutherland successfully advanced through the various outdoor and indoor departments, eventually becoming chairman of the staff in 1930, holding this position until retirement in 1938. He had continued in general practice until 1926, and was probably the last of the old order to combine a large general practice with an in-patient gynæcological appointment in a teaching hospital. During the eight years of his staff chairmanship, Sutherland was found by the hospital to be such a wise and reliable counsellor that as soon as a vacancy occurred on the committee of management, he was elected, and continued on it until his death. In every department of the hospital he maintained the keenest interest, and though many years had elapsed since his retirement from the active staff, he continued until the week-end before his death to have lunch each day with honorary and resident medical officers. He had inherited in a pleasant degree what Emerson once unrestrainedly called the Scottish insanity of dialectics, and always took an active part in any discussion, drawing on a rich fund of anecdote and reminiscence with which his war service, several trips abroad and a long experience of general practice had endowed him.

In Egypt, Sutherland had been in the same hospital as Colonel James Barrett, for whose ability, resource and driving force he always retained the highest opinion. When the Countess of Dudley, wife of the then Governor-General, captured the enthusiasm of Barrett for her Bush Nursing scheme, the latter's vigorous participation practically ensured the success of this great work. Fifteen years were to pass after the first Bush Nurse had been placed in the lonely and inaccessible township of Beech Forest before Sutherland was to join the Central Council as a representative of the British Medical Association, but thereafter his interest never waned, and he continued on the council for twenty-seven years, being its President from 1946 until his death. Many a week-end of his latter years was spent traversing Victoria from one end to the other, inspecting Bush Nursing activities. He found this no hardship, for he dearly loved the countryside, and maintained an especial interest in the rural section of the community. A close friend was Professor Marshall Allan, who succeeded Barrett as secretary of Bush Nursing, and the writer well remembers Sutherland's enthusiasm occasioned by the publication in 1928 of Allan's report, which revealed that, of 2000 births undertaken by the Bush Nurses, not a single maternal death had occurred; furthermore the neonatal and stillborn mortality was extremely low. "And not one of them had an X-ray beforehand", commented Bertram with no little satisfaction.

Sutherland's loyalty to his profession was exemplified in the parts he played in the British Medical Association and various other committees, being a member of the Permanent Post-Graduate Committee from 1935 and on the executive of the Hospital Benefits Association. First elected to the Branch Council in 1912, he served—apart from the years of war service—for twenty-four years, a splendid record, when one reflects on the sacrifice of leisure and home life made by every British Medical Association councillor. In 1932 he succeeded Victor Hurley as President of the Victorian Branch. At times when activities of the Royal Colleges might fortuitously derogate from the British Medical Association, Sutherland's voice was always strong in defence of the precept that loyalty of all medical graduates should primarily be given to the British Medical Association.

Sutherland was a man of middle height, very sturdily built, with a rock-like pair of hips and shoulders, and a slow, slightly rolling gait. He had come to the university with a reputation as an excellent footballer, but chose to play lacrosse. He became steeped in the history and the finer points of this game, which in the late nineties was enjoying a great vogue in Melbourne, even threatening football as the winter game. Bertram had a great flair for lacrosse, and soon became one of the oustanding players in the back division; at a dinner some years ago, Sir John Latham (himself a fine lacrosse player) referred to Sutherland as the best back man he had ever seen. He played in the 1900 champion university team, which won every game and finished with the amazing record of 168 goals to 4. In lunch-time reminiscences Sutherland would describe how, after the Canadians visited Australia early in the century, a complete alteration developed both in the type of game and its popularity. It changed to a short passing game, in which small baggy crosses were used, and in which interference—freely availed of by Sutherland with his broad hips and shoulders—was prohibited. In Sutherland's time it was played on the leading football grounds, alternately with the League football teams, and long, tightly strung rackets were wielded. One crack player of the time actually threw the ball 165 yards (virtually the length of the Melbourne Cricket Ground), and passes between players 100 yards apart were frequently accomplished. Sutherland also gained his cricket blue; the records of that time describe him as a sound bat and a good medium-paced bowler.

He married late in life, and since his wife's death almost twenty years ago had lived alone, except for sporadic domestic help, in a Toorak flat, doing the daily housekeeping and preparing his own meals. Though in later years a wide reader—particularly of biography and history—he possessed no special facility either in the spoken or the written word, and cannot be recorded as a teacher or a writer of any note. But there was little about the Women's Hospital he did not know, for he had participated in its development from a small group of lying-in buildings to a great institution of world-wide reputation; whereas in 1910, the year of his appointment as anæsthetist, 1200 babies were delivered, in 1951 this had risen to 6500. He had been brought up with, and had practised very successfully, the methods of the older and harder school, and used constantly to aver that the younger generation leaned far too heavily on laboratory methods of diagnosis. One could almost see his Caledonian corpuscles squirming at the rising costs of hospital administration, and he justified his misgivings by explaining, with characteristic emphasis, that when he joined the staff the total annual cost of administration was £9300, whereas today it has risen to £339,000. But he became very proud of the hospital pathological department, and even softened towards radiology, latterly becoming a constant visitor to the X-ray department; on one occasion—perhaps an unguarded moment—he was heard to say that X-ray pelvimetry had more merit than its clinical counterpart. To the right of the political centre, Sutherland had little enthusiasm for the welfare State or nationalization of medicine, quoting John Stuart Mill as his authority, that whatever crushes individuality is despotism, by whatever name it may be called. He is survived by his mother—who has reached the advanced age of ninety-six years—and four sisters; to all his relations he was deeply attached.

Bertram Milne Sutherland—"old Bertie" as in latter years he was effectionately called at the hospital—will be remembered in Victorian medical circles, not only for the human qualities of a sturdy personality, but also for his long years of honest and devoted service to the Bush Nursing Association, the British Medical Association and the Women's Hospital, Melbourne.

Dr. J. W. Johnstone writes: With the death of Dr. B. Milne Sutherland there passes the last of a generation, and it turns the page on an era in the long history of the Women's Hospital which none of his many colleagues can survey, except by hearsay. It would be incorrect to say that he outlived his generation; rather he lived successfully with many. It is only reflection which reveals that his association with medicine spanned the first half of the century, the last forty years of which, except for war service, were given to the hospital. In 1910 when he joined the staff, the horse and buggy was being replaced by the motor-car, although mass production had not yet set the whole world on wheels. His five senior colleagues had a medical background rooted in the previous century. The large accumulation of empirical knowledge had yet to be dispersed by scientific infiltration. Medical treatment was sedative and supportive, or concerned with promoting the natural functions with bleedings, purges, diaphoretics and clysters. Except for morphine, atropine, digitalis and mercury, the pharmacopœia was largely redundant, although only the year before, Paul Ehrlich, with his new organic arsenical, had opened up the new era of specific ætiotrophic remedies. The day of specialism was just dawning, and the obstetric physicians and gynæcological surgeons of consulting rank commanded respect, if not for cultural elegance, at least by a measure of ceremonial pomp. It was a time of higher fees and graceful living, for the interfering State had not yet stifled, under its oppressive ceiling, man's better qualities. Merely to mention the factors concerned in the growth of medicine and the Women's Hospital, in which Sutherland took an active part, would degenerate into a mere compendium, although in a forty-year sweep it displays one pageant of progress. He saw operative obstetrics replaced by safe lower segment Cæsarean section, the relief of pain, blood grouping and the control of the hæmorrhages, radiation diagnosis and therapy, hormones and pregnancy tests, the creation of the professorial chair and three Royal Colleges, the rise of the full honorary staff from six to sixteen, the increase in the number of confinements to six

and a half thousand yearly, the rise of the departments of radiology and of pathology, bacteriology and biochemistry, and the fulfilment of Ballantyne's dream in universal antenatal supervision under the most modern circumstances. He saw the chloroform of his first "rag and bottle" years replaced by a galaxy of paraphernalia, supported by numerous drug adjuvants and relaxants, all under the control of an anæsthetic unit. As a member of the committee of management, he supported the rebuilding of the whole Women's Hospital with the replacement of the proposed septic block by a private-intermediate section, for he saw the decline and fall in his own hospital of the "Captain of the Men of Death" in obstetrics—puerperal sepsis. In his time the maternal mortality was slashed to less than a quarter, and the infant mortality to a third. It was perhaps because of his country upbringing, his family association with medicine, and his long initial training in general practice, that he was enabled to bring the personal touch to his hospital patients. He attended them all before and after operation and made a full round in the puerperium, conversing in a friendly manner and in terms which they understood. He was trained in all five senses and gifted with the sixth one of a practical clinical intuition, so that he saw and treated the whole person, and not her organs. The simplicity, sincerity and spontaneity of his recent after-dinner speech at the Hotel Windsor is remembered with affection in England, and mentioned by Sir William Gilliatt in his latest letter to the Royal College of Obstetricians and Gynæcologists in Victoria.

Dr. Edward R. White writes: Bertram Milne Sutherland was a genial, well-known and, in later years, venerable figure at most medical meetings over many years. He was always ready to speak and add to the value of discussion from the wealth of experience in his own subjects of obstetrics and gynæcology. In his youth he succeeded to his father's large general practice in Moonee Ponds, a suburb of Melbourne, which he relinquished later in order to specialize in obstetrics and gynæcology. In 1914 he was appointed to the Women's Hospital, Melbourne, as obstetric surgeon, after a period of residentship there, which began a long and continuous term of surgical service to that hospital, ending only with his lamented death thirty-seven years later. He eventually became senior surgeon and chairman of the honorary staff, and on his retirement in 1937 he was appointed honorary consulting surgeon. In 1938 he was elected to the committee of management of the hospital, and so continued to render valuable service to that institution during the major part of his professional life. In World War I, B. M. Sutherland enlisted at once as a surgeon in Number 1 Australian General Hospital in Egypt, and later he became lieutenant-colonel and commanding officer of Number 3 Australian Auxiliary Hospital, Dartford, England; for his services he was awarded the O.B.E. As a leading obstetrician and gynæcologist in Melbourne, he not only took an active part in public medical affairs, but was most meticulous in promoting the ethical standards of his profession. Many generations of residents, students and nurses remember with gratitude and affection the help and instruction that this kindly experienced surgeon gave them during their early formative years.

The Royal Australasian College of Physicians.

ALLOCATION OF CORTISONE.

THE Royal Australasian College of Physicians wishes to advise medical practitioners that on and after February 1, 1952, all applications for cortisone should be sent direct to the Deputy Director of Health in each State. Allocations will be made by the Deputy Directors of Health in accordance with recommendations for the use of cortisone made by The Royal Australasian College of Physicians.

Applications for supplies of cortisone should include the following details: (*a*) Name, age and occupation of patient.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED JANUARY 5, 1952.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.[2]	Australian Capital Territory.	Australia.[3]
Acute Rheumatism	..	..	..	..	..	..	..	..	..
Amœbiasis	..	..	..	..	1	..	..	..	1
Ancylostomiasis	..	..	3	..	2(2)	..	..	..	5
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	..	..	16(15)	..	..	..	..	..	16
Diphtheria	3(1)	8(5)	8(4)	..	4(4)	..	..	..	23
Dysentery (Bacillary)	..	3(1)	6(5)	..	..	..	..	3	12
Encephalitis	..	1	..	..	..	..	..	..	1
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	..	..	..	..	..	..	..	..
Infective Hepatitis	..	..	..	..	2	..	..	..	2
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	1	..	..	..	1
Leptospirosis	..	..	1	..	..	..	..	..	1
Malaria	..	..	..	..	..	..	..	..	..
Meningococcal Infection	..	5(2)	2	..	1	..	..	..	8
Ophthalmia	..	..	..	..	..	..	..	..	..
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	3(2)	2(1)	8(6)	16(10)	..	..	..	..	29
Puerperal Fever	..	..	..	..	..	..	..	..	..
Rubella	..	13(10)	..	..	..	..	..	..	13
Salmonella Infection	..	..	..	..	..	..	..	..	..
Scarlet Fever	21(16)	22(14)	2(2)	5(5)	..	7(2)	..	..	57
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	..	..
Trachoma	..	..	..	..	..	..	..	..	..
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	7(5)	8(5)	4(1)	4(4)	7(3)	1	..	..	31
Typhoid Fever	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne)	..	..	1	1(1)	..	..	..	..	2
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.
[2] Figures not available.
[3] Figures incomplete owing to absence of returns from the Northern Territory.

(*b*) Diagnosis. (*c*) Essential clinical data; where applicable, these should include the following: (i) blood count, including hæmoglobin estimation and eosinophile cell count; (ii) erythrocyte sedimentation rate; (iii) X-ray examination of bones, joints and chest; (iv) presence of signs of cardiac and/or renal disease, tuberculosis, *diabetes mellitus* and syphilis; (v) electrocardiogram, serum potassium content, serum chloride content, serum protein content, carbon dioxide combining power, and urinary steroid levels. (*d*) An estimate of the amount of the drug required and whether suspension or tablet form is preferred. (*e*) Details of where the treatment is to be carried out. (*f*) An undertaking to supply a full report of results of treatment in each particular case, including details of the investigations listed above.

EXAMINATION FOR MEMBERSHIP.

INTENDING candidates for the examination for membership of The Royal Australasian College of Physicians to be held in April-May, 1952, are reminded that applications for this examination close on Saturday, March 8, 1952. Application forms may be obtained from the Honorary Secretary, 145 Macquarie Street, Sydney.

The written examination will take place in capital cities where candidates are offering on Saturday, April 5, 1952, and the clinical examination will be held in Sydney from approximately May 22 to 24, 1952, and in Adelaide from approximately May 26 to 28, 1952.

Congresses.

FIRST INTERNATIONAL CONGRESS ON MEDICAL LIBRARIANSHIP.

IT is proposed to hold an International Congress on Medical Librarianship in London in July, 1953. Sir Cecil Wakeley, K.B.E., C.B., President of the Royal College of Surgeons of England, has kindly consented to accept the honorary presidency of the congress. The programme will include formal sessions for reading and discussion of papers, visits to medical libraries and social functions. It is hoped also to have in connexion with the congress an exhibition of medical books and periodicals and library equipment. All those actively engaged or interested in medical librarianship throughout the world are invited to participate. Requests for further information may be addressed in advance to the Honorary Secretary, First International Congress on Medical Librarianship, c.o. The London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1.

Australian Medical Board Proceedings.

TASMANIA.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Act*, 1918, as duly qualified medical practitioners: Shugg, Charles Michael, M.B., B.S., 1951 (Univ. Melbourne); Murray, H. M. L., L.R.C.P., L.R.C.S. (Glasgow), 1928, D.P.H. (Edinburgh), 1930; Fay, Peter William, M.B., B.S., 1951 (Univ. Melbourne); Hargraves, Arthur Fenton, M.B., B.S., 1951 (Univ. Melbourne); Hunn, John McLeod, M.B., B.S., 1951 (Univ. Melbourne); Wood, Alexander Sandford, M.B., B.S., 1951 (Univ. Melbourne); Barnes, Henry Clifford, M.B., B.S., 1951 (Univ. Melbourne); Goulston, Keith Sydney, M.B., B.S., 1951 (Univ. Melbourne).

Notice.

AUSTRALIAN SCIENTIFIC SOCIETIES AND PROFESSIONAL ASSOCIATIONS.

THE first of two directories, dealing respectively with Australian scientific societies and Australian research institutions, which are being prepared by the Council for Scientific and Industrial Research Organization, has now been issued as C.S.I.R.O. Documentation Section Pamphlet Number 1, by G. J. Wylie and Nona Lowe, under the title "Australian Scientific Societies and Professional Associations". Copies may be obtained free of charge on application to the Senior Information Officer, Council for Scientific and Industrial Research Organization, 314 Albert Street, East Melbourne, C.2. The second directory, covering Australian research institutions, is nearly ready for publication, and a further announcement will appear in this journal when it is available.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Scarlett, Geoffrey Anthony Gerard, M.B., B.S., 1951 (Univ. Sydney), St. Joseph's Hospital, Auburn.

Schnitzler, George Julius, M.B., B.S., 1951 (Univ. Sydney), 3 Courallie Road, Northbridge.

Ward, William John, M.B., B.S., 1951 (Univ. Sydney), 12 Phillip Street, Enmore.

Diary for the Month.

FEB. 5.—New South Wales Branch, B.M.A.: Organization and Science Meeting.
FEB. 6.—Western Australian Branch, B.M.A.: Council Meeting.
FEB. 7.—South Australian Branch, B.M.A.: Council Meeting.
FEB. 8.—Queensland Branch, B.M.A.: Council Meeting.
FEB. 12.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178 North Terrace, Adelaide): All Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rate is £5 *per annum* within Australia and the British Commonwealth of Nations, and £6 10s. *per annum* within America and foreign countries, payable in advance.